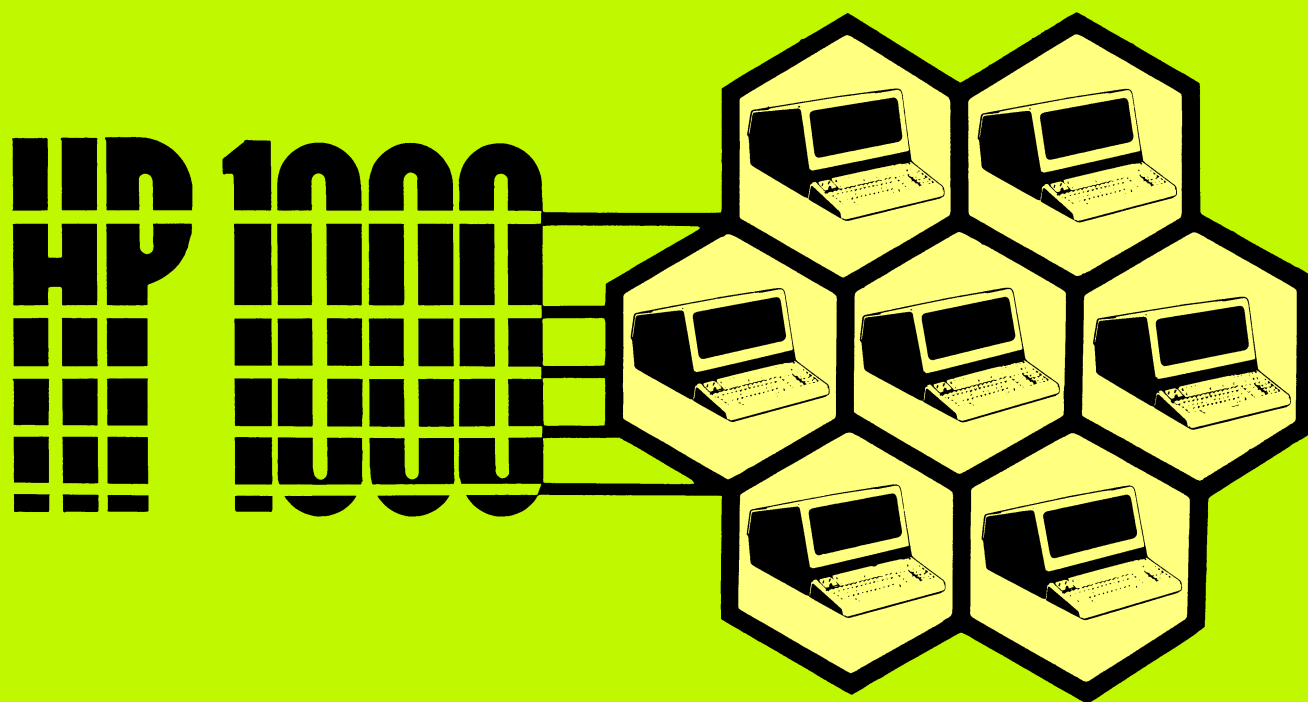


EDIT/1000 User's Guide



EDIT/1000

User's Guide



**HEWLETT
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Preface

This manual is a guide for the new users of EDIT/1000 which is an editor program in the RTE Operating System. It is assumed that EDIT/1000 is ready to be run. It is not the intention of this manual to cover areas in the operating system such as operations and error recovery.

The purpose of this manual is to show you how to create, modify, and manipulate ASCII files. You should first familiarize yourself with the basic concepts, features and capabilities of EDIT/1000 as well as terms and conventions used throughout this manual. These are given in Chapter 1.

The operations of EDIT/1000 are given in Chapter 2. This is a "how to" chapter with as many common and special tasks illustrated. Naturally, the full power of EDIT/1000 cannot be captured and fully demonstrated. You are encouraged to try these examples and experiment with various commands to develop your own means of performing certain tasks.

Chapter 3 describes all the EDIT program commands and the special characters associated with certain commands. The commands are given in alphabetical order so that you can flip through the pages to find the command you are looking for. Examples are provided as necessary to demonstrate command usages. This chapter can be used as a reference.

Appendix A provides information for loading EDIT/1000 into an RTE Operating System. Loading should be done by the system manager or someone knowledgeable about RTE designated by the system manager.

Appendix B describes the multipoint environment for EDIT/1000.

NOTE

All references to RTE include RTE-IVB, 6/VM, XL, and RTE-A unless specifically noted.

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Glossary

Following is a glossary of terms that you will encounter throughout this manual. You may want to refer back to this list later when necessary. Some terms are further explained in Chapter 1 and in the command descriptions in Chapter 3.

anchor	A character used to start a search or a match at the beginning of the search window.
case folding	An option initially turned on to allow recognition of either upper or lower case letters.
character class	A group of characters any one of which can be used as the character to be searched/matched.
closure	The metacharacter "*" used to make a text pattern which matches zero or more successive occurrences of the single character pattern. For example, x* matches zero or more x's; xx* matches one or more x's; [a-z]* matches any string of zero or more lower case letters. If a number of combinations are present, the longest one is used. Note that for @ in pattern specification, the shortest is used.
command stack	A list of EDIT commands entered during any one session. The list is accessible with the command stack command (/).
control character	A non-printing character entered by pressing both the CNTL key and the appropriate character. Control characters are used as sub-commands in line and screen mode editing.
current prompt	The EDIT prompt character in effect. Default is a slash. may be changed by SE PC command described in Chapter 3.
default	The initial or reset condition for an optional parameter in the EDIT command string.
delimiter	A character used to separate command and parameters. Required for some commands and optional for others.
escape character	A character used to revert a character with special meaning to its original meaning.

line specification	Parameters that specify one line or a range of lines. Usually they precede certain commands. Special characters may be used to indicate offsets. These characters may be checked on-line with "? LS" .
list file	A file created or opened by the L and K commands. Specified number of lines may be written to or appended to the list file.
logical unit number	A number (referred to as LU) used by the operating system to identify an I/O device.
mark	An alphabetic label maintained by EDIT; it is attached to a scratch file. Marks are valid for each session.
match	A pattern to be located matching either a specified pattern or all except the specified pattern.
metacharacter	A set of special characters with unique meanings to EDIT. These characters are used in regular expression searches and exchanges. These characters can be checked on-line with "? RE" .
namr	Standard RTE disc file designation. In EDIT, usually means a file name with optional security code and cartridge reference number separated by ":". File type and size are sometimes used in creating a file from EDIT.
options	Either an optional parameter in a command string or an initial EDIT condition that can be changed with the set option command. Refer to the SE command description for details.
pattern	A character string to be searched/exchanged.
range	A number of lines with a defined begin and end line number. Can be either absolute numbers or line specification characters with or without offsets.
regular expression	Special patterns using the metacharacters for unique searches and exchanges. Use of regular expressions provides a means of specifying alternates and the ability to parenthesize patterns. For example, "X[+-]Y" which matches X+Y or X-Y. It is an EDIT option that must be turned on to take effect.

reverse match	A search in which a match occurs only if the specified pattern is not found anywhere or on a line-by-line basis.
command string	The various fields entered in an EDIT command. These are typically the additional EDIT commands, the optional (or required) line specifications, pattern and exchange fields, and command options.
recovery mode	EDIT enters the recovery mode whenever a scratch file is detected. No changes can be made; screen mode is disabled. All other commands are allowed. Must abort or exit restoring or creating with a file name before running any editing session.
run string	Usually a run program command with all the permissible command parameters. For example, RU,EDIT,file,120 S.
scratch file	Temporary work area on disc where EDIT operates from during the editing session. This area contains the text read into memory.
screen mode	An editing mode in which a number of lines of text is displayed to allow local editing using the editing keys available on the terminal keyboard.
source file	An ASCII file opened and read by EDIT.
string	A group of ASCII characters.
substitute	A replacement pattern when a match occurs during an exchange command execution.
vertical window	The number of lines above and below the pending line to be displayed with the vertical window (W) command.
window	Usually means the search window which confines the search to within two columns defined by the horizontal window settings.

Chapter 1

General Information

Introduction

EDIT/1000 is a utility program in the HP 1000 System with RTE-IVB, 6/VM, A, or XL. It is an editor for textual information in the HP ASCII character set: programs, data, documents, manuals, etc. EDIT operates in either interactive or in batch mode. When used interactively, EDIT accepts commands from a 262X or 264X terminal keyboard. Commands may be entered in either upper or lower case letters.

The EDIT program has the following major features:

- On-Line Quick Reference
- Screen Mode
- Line Range Options
- Sophisticated Pattern Matches
- Program Scheduling
- Command Stack
- Batch Operation
- File Back Up
- Command String Repetition
- Automatic Work File Recovery

On-line reference is readily available with the help commands and information display commands. The help commands (H and ?) provide brief explanations for every command. The explanation includes the command syntax, the default line range and options available. Other useful information is also available. This includes a command summary, explanations of line specification, abbreviations used, special control characters used in line editing, special characters used in sophisticated pattern matches and line specification. There are commands that display pattern defaults and other pertinent information such as default source file name and current options status. Typical commands of this type are the SH (show option) and LI (line length) commands. A summary of help and information display commands as well as other commands grouped by functions is given in Chapter 2.

Screen mode allows the use of the local terminal editing keys to modify the file being edited. A block of lines can be displayed and modified using the editing facilities of the terminal. The edited lines (a screen) can be used to replace the old lines or ignored if desired. One can move forward or backward from screen to screen. Screen mode operation is further described in Chapter 2 and in the S command in Chapter 3.

Line range is an option for certain commands such as the search or exchange commands. You can use either the default range or specify the range of lines where the command is to be performed. The default range parameters are shown inside the optional brackets [] in the on-line quick reference and in the command descriptions in Chapter 3. Refer to the section How To Specify Line Range in Chapter 2 for details.

Sophisticated pattern matches are permitted by enabling the use of regular expressions. This allows the use of characters that have special meanings such as either-or, one or more occurrences, recall a field specified in the search pattern, one of several, indefinite character, etc. Refer to the Use of Regular Expressions and Applications sections in Chapter 2 for more details.

Another program can be scheduled and run from EDIT in the same manner as from the RTE File Manager. Upon completion of that program, the editing session is returned to the point where the program was scheduled. Refer to the Run a Program section in Chapter 2 and the RU command description in Chapter 3 for details.

The EDIT program saves up to 20 command lines. These commands can be recalled and modified with the terminal editing keys if necessary. Any one (or none) of these commands can then be executed if desired. Refer to the "/" command description in Chapter 3 for details.

Batch operation can be done in several ways. EDIT commands can be entered on the same line separated by a command separator. These commands are then executed in order from left to right. Another means is to create a file consisting of EDIT commands. This command file is then transferred to from an editing session or included in the EDIT program run string. This eliminates any operator interactions. A third method is to include editing commands in the EDIT program run string. All editing can be done without any operator intervention. Refer to the Batch Mode Operation section in Chapter 2 for details.

Periodic backup of files being edited can be done without leaving the editing session. The original source file may be replaced with the partially edited version or a new file created. Another means is opening or creation of a list file when lines are being listed or deleted (with the L and K commands respectively). These files can be manipulated from the editing session; they may be closed or opened as required to accomplish the required task. For example, the source file can be closed so that the program may be run from the file manager.

Refer to Manipulating Files section in Chapter 2 for more information.

A command string entered can be repeated as many times as needed. This is accomplished with the repeat command. A line of text can also be repeated in the same manner. The repeat command is explained in Chapter 2 of this manual.

Upon abnormal termination, the EDIT work file is left on the scratch file disc (or the user cartridge). EDIT goes into the recovery mode the next time it is run to allow the user to examine the work file but not to change it. The work file must be purged (by aborting the current edit session) or saved (by EC, ER, WC, or WR) before another edit session can begin.

EDIT operates in the RTE-IVB, RTE-6/VM, RTE-A, or the RTE-XL operating system. It can be run from a 262X or 264X display terminal driven by DVR05 (or driver DD.05 on RTE-XL/A). Under RTE-IVB or 6/VM, it can be executed with driver DVR00 without the screen mode or command stack features. It can also be used with DVR07 as described in Appendix B of this manual.

With some earlier versions of the 2621 terminals, the cursor sensing feature may not be available and thus the Q, S, and command stack (/) commands are not allowed. In this case, only line mode editing is available.

Basic Concepts

EDIT Work Areas

EDIT reads the source file and transfers it to a work area on disc called the scratch file. (See appendix A for a description of the scratch file.) EDIT uses a special internal format in the scratch file which allows fast access to a given line and efficient modification of text. When lines are inserted or deleted, the scratch file is updated and the line numbers are changed accordingly for each file modification operation.

When editing is completed and EDIT is terminated with one of the exit commands, the content of the scratch file is written to the new file specified or restored to the original source file. The operation of EDIT is shown in Figure 1-1.

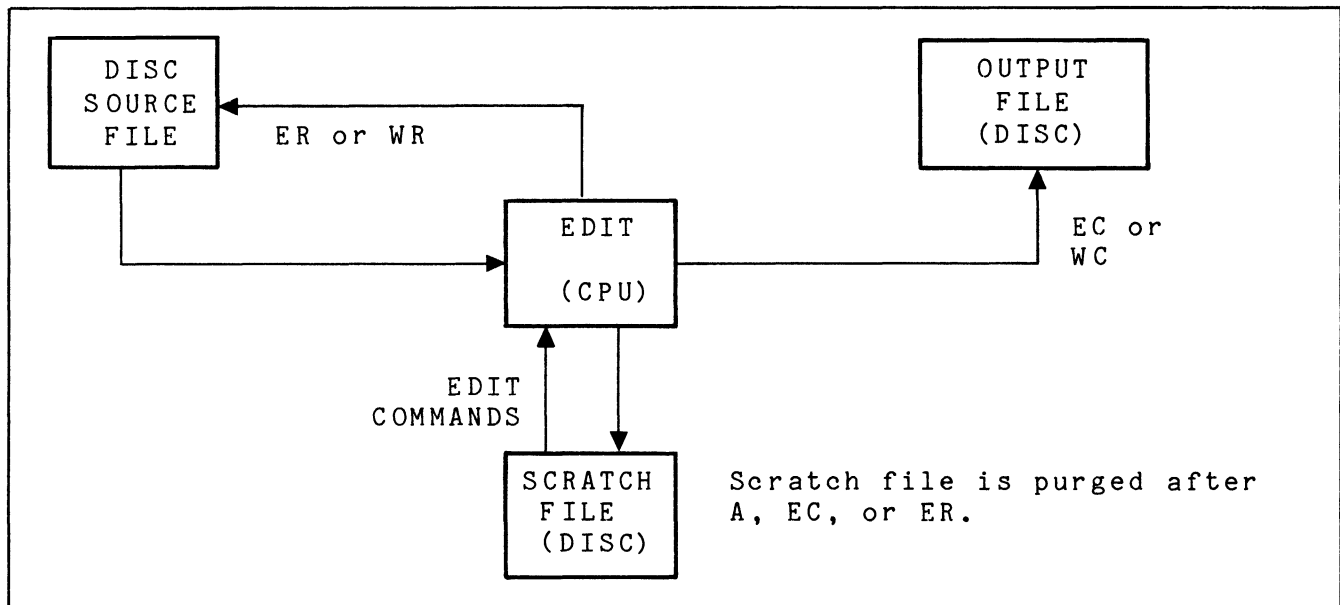


Figure 1-1. File/Work Area Relationship

Upon normal termination, EDIT purges the scratch file. The scratch file if left unpurged for any reason, e.g., system crashes or other abnormal EDIT termination, will cause EDIT to enter the recovery mode the next time it is run. No further editing session can take place until the recovery mode is terminated by aborting EDIT or terminating it with EC or ER. If the scratch file is corrupted, it must be purged before EDIT can be run.

Pending Line

When EDIT is run, the first line of the source file is displayed. The displayed line is the current line available for editing and is called the "pending line" (often referred to hereinafter as "PL"). This line remains as the pending line until you request a new pending line with an EDIT command. In this way you can continue to re-edit the same line until satisfied.

When you request a particular line of text, EDIT moves through the scratch file until the requested line is encountered. That line then becomes the new "pending line" and is displayed on the terminal. EDIT maintains a "pending line" pointer into the scratch file.

During multiple searches, or when the search for a particular pattern is unsuccessful, EDIT returns to the pending line. In some cases, an option (RT) can be turned off to stop EDIT at the end of file (EOF).

Display Formats

The pending line displayed and listings output by EDIT are always preceded by two blanks. This convention allows room for the EDIT prompt and a single character command, which aligns the new text with that displayed by EDIT. Error messages, in contrast, always begin in column 1. This is so that the difference between an EDIT message and a line of text can be easily determined. For example:

```
      EOF      EDIT text written in the file
EOF          EDIT message
```

Line Length

EDIT has a default line length of 150 characters. If your output device supports a shorter maximum line length, you need to shorten the EDIT line length to prevent possible line truncations. Table 1-1 shows output devices commonly used with EDIT and the number of characters per line each device supports. Refer to the Option Setting Section in Chapter 2 or to the SE command description in Chapter 3 for information on how to set line length.

Table 1-1. Typical Maximum Line Lengths for Common Devices

DEVICE	LINE LENGTHS	COMMENTS
Punched Cards	80 Characters	
CRT	72 - 150 Characters	Line length varies with model of terminal used.
Magnetic Tape	150 Characters	Default maximum length supported by EDIT.
TTY Device	72 Characters	Longer lines will encounter printing problems.
Paper Tape	150 Characters	Default maximum length supported by EDIT.
Disc	150 Characters	Default maximum length supported by EDIT.
Line Printer	80 - 150 Characters	Number of characters varies with printer model. Consult appropriate manual for your printer.

EDIT Prompt Character

When EDIT is used in the interactive mode, it prompts for input with a slash (/). The prompt character may be altered by the prompt setting option (PC). Refer to the set option (SE) command for details. Thereafter, the specified character is output as the EDIT prompt.

Error Messages

EDIT operating errors are noted with a question mark followed by an up-arrow (^) pointing to the illegal field. Brief explanations are given when necessary to clarify the issue. For example:

```
/125%B
?      ^      (Illegal line range)
/
```

Other descriptive error messages may also be encountered. A few common messages are shown below.

```
/sh zebra Not an option. Type SH to show all options and their current
setting.  /
```

```
/ec,lemon
File already exists LEMON:::4:1
```

```
/m,xyzww
No such file XYZWW
```

On-Line Quick Reference

EDIT provides an on-line quick reference. A summary of the commands and special characters can be displayed with a "?" or "H" command. Individual command syntax and explanation can be displayed with either of the two help commands followed by the command in question. Additionally, a brief explanation of the following can be obtained:

Abbreviations used by EDIT (entering H EX)

Pattern and associated special characters (H PA)

Pending line editing and associated edit commands (H PL)

Regular expression and metacharacters (H RE)

Line specifications and associated special characters (H LS)

Refer to the HELP commands (H and ?) given in Chapter 3 for details.

Pattern Specification

A pattern is a string of characters to be searched, matched, or substituted. There are two major types of patterns, a normal pattern and a special pattern using metacharacters with the regular expression turned on. The normal pattern is described here and assumed throughout this manual. Patterns containing metacharacters are described in the Using Regular Expressions Section in Chapter 2.

When a line is found containing the specified pattern, a match occurs. EDIT either makes that line the pending line or, as in a multiple search, indicates the lines where a match occurs.

In an exchange command, the search pattern is considered as the match pattern. This is the pattern to be replaced by the substitute pattern specified.

A pattern is specified within a pair of delimiters which can be any punctuation marks except commas or spaces. Throughout this manual, the current prompt character (/) is adopted as the pattern delimiters.

A match occurs if a specified pattern is found anywhere within the horizontal search window. The search window always applies in normal pattern specification. However, a match outside the window can occur if the N option is specified in the search or exchange command.

There are several characters that have special meanings when used in pattern specification. The anchor character (^) specifies that the pattern is to start at the beginning of the window. It has special meaning only when used at the beginning of the pattern, immediately after the first delimiter. Found anywhere else in the pattern, it is considered as the up-arrow character ^.

The @ character specifies that zero or more character may be skipped during a match on a line. If various combinations occur as a result of the @ character, the shortest match is chosen. For example, if a@a is specified, the string ababbabbba contains three matches. In this case, the shortest one is chosen (aba). An example of this is shown below.

```
ababbabbba
/X/a@a/Foo/S
FOOabbabbba
```

If any of the above characters need to be included in the pattern, the escape character (\) can be used to revert any one to its original meaning. For example, to find "X/Y", the pattern specified is "X\\Y".

File Specification

I RTE-IVB and RTE-XL

In EDIT, files are specified using the standard RTE File Manager naming convention (namr). The subparameters may be omitted from the end of the list. If an embedded subparameter is omitted, its position must be indicated by the colon (:). The namr format is:

```
filename[:security code[:cartridge[:type[:size]]]]
```

where:

file name - A unique name consisting of up to six printing characters. Observe the following restrictions:

Characters not allowed:

+ - , : { } | ~

First characters may not be a number. Leading blanks will be ignored by the editor.

security - Optional. A positive integer, a negative integer, or two legal file name characters. A positive integer (not zero) or an ASCII code provides write protection. A negative integer provides read and write protection.

cartridge - Optional. Can be the positive cartridge reference number, the negative logical unit number, or two legal file name ASCII characters.

type - Optional. Standard RTE file types except types 1,2,5,6, or 7.

size - Optional. Specified in number of blocks. If size given is negative, EDIT will create a file which is the exact size needed for the current work area. If defaulted, for a file 6 blocks or smaller, EDIT will create a file exactly the same size. For a file larger than 6 blocks, EDIT will create a file whose size is in multiples of 6 blocks. This is done to prevent slower file access which occurs when the number of blocks in a file is relatively prime to the file DCB size. (Refer to the RTE programmer's Reference Manual for more information.) If size is specified as a positive number, the output file is created with the size specified.

RTE-6/VM

When Edit is used with RTE-6/VM under the CI file system, the pathname file naming convention (file descriptor) or the namr convention may be used. The namr format is used only to refer to files on FMGR cartridges. The file descriptor format is:

```
filename.type-extension::dir:type:size[user]>node
-OR-
/dir/subdir/.../filename.type-extension:::type:size[user]>node
-OR-
filename[:security code[:cartridge[:type[:size]]]]
```

where:

filename - A unique name consisting of up to 16 characters. Characters must meet namr character restrictions.

type-extension - Optional. Four character field separated from file name by a period; it is used to describe the type of information in the file.

Typical file type extensions are:

```
.cmd      Command file
.ftn      FORTRAN source file
.lod      LINK command file
.lst      Program listing
.mac      Macro source file
.pas      Pascal source file
.txt      ASCII text file
```

dir - Optional. Specifies the global directory for the file. The dir can be up to 16 characters long, not counting delimiters ("/").

subdir - Optional. Specifies one or more sub-directories (separated by ("/") for the file. Any number of sub-directories can be specified with the limitation that the entire file descriptor cannot be more than 64 characters long.

type - Optional. Standard RTE file types; see type entry in the previous section for type restrictions.

File Specification

- size** - Optional. Specified in number of blocks. If size is specified as a positive number, the output file is created with the size specified. If the size is specified as a negative number, the file is created with that many 128-character blocks.
- user** - Optional. Enclosed in square brackets; specifies the user account under which this file exists.
- node** - Optional. Preceeded by a ">". This indicates the DS node where the file resides.

RTE-A

In EDIT, files are specified using the standard RTE File Manager naming convention (file descriptor). The subparameters may be omitted from the end of the list. If an embedded subparameter is omitted, its position must be indicated by the colon (:). The file descriptor format is:

```
filename.type-extension::dir:type:size[user]>node
```

-OR-

```
/dir/subdir/.../filename.type-extension:::type:size[user]>node
```

-OR-

```
filename[:security code[:cartridge[:type[:size]]]]
```

where:

- | | |
|----------------|--|
| filename | - A unique name consisting of up to 16 characters. |
| type-extension | - Optional. A field separated by a period with up to four characters; used to describe the type of information in the file. Typical file type extensions are:

.cmd command file
.ftn FORTRAN source file
.lst listing
.mac Macro source file
.pas Pascal source file |
| dir | - Optional. Specifies the global directory for the file. The dir can be up to 16 characters long, not counting delimiters ("/"). |
| subdir | - Optional. Specifies one or more sub-directories (separated by ("/")) for the file. Any number of sub-directories can be specified with the limitation that the entire file descriptor cannot be more than 64 characters long. |
| type | - Optional. Standard RTE file types except types 1, 2, and 6. |

- size - Optional. Specified in number of blocks. If size given is negative, EDIT will create a file which is the exact size needed for the current work area. If defaulted, for a file 6 blocks or smaller, EDIT will create a file exactly the same size. For a file larger than 6 blocks, EDIT will create a file whose size is in multiples of 6 blocks. This is done to prevent slower file access which occurs when the number of blocks in a file is relatively prime to the file DCB size. (Refer to the RTE Programmer's Reference Manual for more information.) If size is specified as a positive number, the output file is created with the size specified.
- user - Optional. Enclosed in square brackets. This specifies the user account under which this file exists.
- node - Optional. Preceeded by a ">". This indicates the DS node where the file resides.

NOTE: The third form is used only to access files from FMGR cartridges. Refer to the Programmer's Reference Manual for more information.

File Naming Defaults

EDIT retains the source file name (specified initially in the run string or in an FI command) as the default file name. This name can be used in any command that accesses a file (EC, ER, FI, K, L, M, TR, WC, WR) as a default for the file name specified. The name entered for each of these commands is actually treated as a mask to be overlayed on the default name before being used. Normally, the new name will be used. However, if a "-" (dash) is specified in the file name, the character in the same position in the default name is placed into the new name. For example:

Default File Descriptor	File Descriptor Specified in Command	File Descriptor Used
-----	-----	-----
1) TEST::SP	JUMP::SP	JUMP::SP
2) TEST::SP	B--::SP	BEST::SP
3) TEST::SP	-A-K::SC	TASK::SC
4) TEST::SP	---A	TESTA::0
5) TEST::SP	-	T::0
6) TEST::SP	::RS	TEST::RS
7) TEST::SP	:5	TEST:5:SP

Note that if the file name is left out altogether, the entire default name is used (as in examples 6 and 7). Note also that only the file name is defaulted; the other file descriptor parameters are taken just as they are specified in the new file descriptor (examples 3-6). Thus, if the crn is not specified, it defaults to zero. The only exception to this rule is when the security code is specified, but the crn is not. In this case the crn in the default will be used (example 7). This is useful for the case where you have opened a file and specified the wrong security code. You can execute the FI (or ER, WR, etc.) command specifying only the correct security code; the name and crn will be the same as entered previously.

The FI command modifies the default file name. Other file-oriented commands may use the default name, but they leave the default unchanged. For example:

Default File Descriptor	Command	File Descriptor Used	New Default File Descriptor
-----	-----	-----	-----
TEST::SP	FI B---:SP	BEST::SP	BEST::SP
TEST::SP	TR B---:SP	BEST::SP	TEST::SP

The ?? command shows the default file descriptor.

Note that only the file name is defaulted as explained above, not the directories or type extension. For example:

Default File Descriptor	File Descriptor Specified in Command	File Descriptor Used
-----	-----	-----
1) /DIR/TEST.TXT	/DIR/B---	/DIR/BEST
2) /DIR/TEST.TXT	/DIR/.SRC	/DIR/TEST.SRC
3) /DIR/TEST.TXT	-A-K.MAC	TASK.MAC

Command Syntax and Conventions

To use EDIT efficiently, you must know the command syntax and keyboard conventions it expects. The command syntax and conventions used in this manual are summarized in Table 1-2. The special characters used in regular expressions are described in the Using Regular Expression section in Chapter 2.

Chapter 2

EDIT Operations

Introduction

EDIT/1000 is a friendly editor designed to increase your productivity in program development and text preparation or modification. It is a powerful tool and thus requires some sacrifice in simplicity of operations. As with any software tools, you need to learn the command and parameter syntax and the capabilities of each command. With EDIT/1000, on-line help is readily available to refresh your memory on the command mnemonics and syntax, purpose of each command, and the default parameters. You can learn about EDIT only by using it. Don't be afraid to make mistakes. EDIT has a panic button in the form of the undo command (UN) for error recovery as long as no other modifications have been made. Try something new, make use of its full potential rather than only part of it.

This chapter describes the normal EDIT operations, beginning with simple steps, progressing gradually in complexity. Some applications are also given, especially for regular expressions. If you are familiar with the general principles of editors and the RTE system, you may want to move directly to the section of interest to you. There will be certain redundancy in this chapter. It is designed to refresh and to reinforce your knowledge of EDIT/1000.

Before you start, make sure that EDIT/1000 has been loaded into your system and is ready to be run. If not, get your system manager to do it for you. It is assumed that you are ready to run EDIT (i.e., you are logged on a session and ready to run a program).

The procedures and examples shown in this chapter are common means of accomplishing the various tasks illustrated. You may come up with a preferred way of doing a particular task. The examples may show certain inconsistency in command format, i.e., upper and lower case letters, y and yes as prompt response, etc. This is done to show the flexibility of EDIT in accepting many forms of input.

Command Summary

Commands That Display Information

?(or H)	Displays a summary of commands in alphabetical order
? <cmd>	Displays information about command specified
?,EX	Displays explanation of abbreviations
?,PA	Displays pattern explanation
?,PL	Displays pending line (PL) editing information
?,LS	Displays line specification information
?,RE	Displays regular expression explanation
H,<cmd>	Same as ?,<cmd>
H,EX	Same as ?,EX
H,RE	Same as ?,RE
H,LS	Same as ?,LS
HL	Displays header lines to mark column numbers
SH ALL	Displays all option setting and default parameters
SH<opt>	Displays setting for option specified
SH UN	Displays text of lines before modification and the commands used to undo the change
L	Displays 20 lines plus next pending line
LE	Displays line length in characters
LI	Displays file size in number of lines
LN	Same as L except that line numbers are displayed
LU	Displays lines without line numbers; turns off LN command
N	Displays pending line number
SZ	Displays approximate file size in 16-bit words
TI	Adds time and date information to a line and displays line
W	Displays 20 lines with numbers and pointer to pending line
WN or WU	Same as W with line numbers or without numbers (WU)
/	Displays command stack to allow selection of any command for execution
??	EDIT copy name and current source file

Option Setting Commands

SE AC	Sets anchor character, initially ^
SE EC	Sets escape character, initially \
SE IC	Sets indefinite character, initially @
SE PC	Sets prompt character, initially /
SE CS	Sets command separator character, initially
SE TC	Sets tab character, initially TAB key or cntl I
T	Sets tab columns, initially 7 and 21
TA	Specifies tab columns for ASMB (7 and 21)
TF	Specifies tab columns for FTN (7 and every 4 columns)
TM	Specifies tab columns for Macro programs (10,26,40,44,48)
TP	Specifies tab columns for Pascal (every 3 columns)
TL	Sets tab stops local to terminal as defined by T
TS	Offsets tab stops 2 columns for screen mode edits
SE WC	Sets window columns, initially 1 and 150

SE SD	Sets default screen size, initially 10 lines above and 10 lines below pending line with a 2-line screen-to-screen overlap
SE SL	Sets maximum screen mode size; default depends on the type of terminal used
SE VW	Sets vertical window size, initially 10 lines above and 10 lines below pending line (20 lines total)
SE LE	Sets line length, initially at the maximum of 150
SE AS	Sets prompt for dangerous commands on or off, initially on
SE CF	Sets case folding on or off, initially on
SE RE	Sets regular expressions on or off, initially off
SE DF	Sets screen mode display functions on or off, initially on
SE RT	Sets no-match return to pending line (on) or to lower range limit (off), initially on
SE TS	Sets automatic time-stamp updating on or off, initially on
SE BE	Set BELL with prompt on/off, initially off

Dangerous Commands

Commands that may corrupt your file if executed inadvertently will prompt you for verification. If the "OK?" prompt is displayed, only a y(es) answer can execute the command. Except for the A and TR commands, even if you enter "y" by mistake, you can still recover by entering the UN command as long as you have not made any more modifications. The "OK?" display can be suppressed with the slash (or current prompt) after the command string and the command executed immediately. Use this feature with caution. These commands are listed below.

<u>Command</u>	<u>Comment</u>
A(ABORT)	Prompt will not be issued if file has not been altered.
D(DELETE TILL MATCH)	Default range is delete only the pending line regardless of pattern specified.
K(KILL LINES)	Default range is PL to last line. Prompt will not be issued if only one line is to be deleted.
TR(TRANSFER INPUT)	Delimiter is required between namr and Q parameter, e.g., "TR namr, Q" or "TR,namr Q".
U(UNCONDITIONAL REPLACE)	Prompt will not be issued if only one line is to be changed. Default is search and replace only the pending line.
X(EXCHANGE)	Prompt will not be issued if only one line is to be changed. Default is search only the pending line.

Commands with Common Default

There are certain commands that share the same default pattern or file. The default conditions can be checked by the SH command. These commands are listed below.

<u>Command</u>	<u>Common default</u>
F	Search pattern
B	"
D	"
`\`	"
``	"
G	match/substitute strings
U	"
X	"
Y	"
ER	source file
WR	"
L	list file
K	"

Search Commands

If you want to find a line with a particular pattern and make it the pending line, use:

<u>Command</u>	<u>Comment</u>
B	Default range is from beginning to end of file. Range must be specified for successive searches.
F	Default range is from line after PL to last line. Useful in successive searches.
'PA'	Searches forward for pattern (PA) specified. If PA is omitted, the last pattern specified in B, F, '', or `` command is used.
`PA`	Searches backward for pattern (PA) specified. Same as `` command.

Delete Commands

The K command is used to delete lines. The D command can be used to delete lines up to a line with a specified pattern.

Exchange Commands

The exchange commands are: G, U, X, and Y. These commands share the same default match/substitute patterns.

<u>Command</u>	<u>Comment</u>
G	Exchanges characters on PL.
Y	Exchanges PL; searches for the next occurrence of match pattern. If found, makes that line PL.
X	Exchanges all occurrences of match pattern with substitute pattern. Default is exchange only PL. Specify range as "l\$" for the entire file.
U	Exchanges a specified length of field starting at at the left window column with a substitute pattern. Default range is PL only. Specify range as "l\$" for the entire file.

Line EDIT Commands

<u>Command</u>	<u>Description</u>
I	Insert line before PL.
<space>	Insert line after PL.
K	Delete line(s).
C	Edit PL and advance to next line.
CO	Copy line(s) to after PL; must have at least one range specification.
G	Exchange pattern on PL.
N	Show pending line number.
O	Copy and EDIT PL.
P	Edit PL.
Q	Edit PL locally using terminal edit keys.
R	Replace PL with new text.
U	Unconditional exchange.
X	Exchange patterns.
Y	Exchange patterns on PL and advance to next occurrence of match pattern.

control characters used for pending line editing:

cntl B	Break line at cursor position.
cntl C	Delete characters.
cntl R	Replace characters.
cntl S	Insert characters.
cntl T	Truncate line at cursor position.
cntl X	Extend line.

Screen EDIT Commands

<u>Command</u>	<u>Description</u>
S	Start screen edit beginning at 10 lines above PL
SE SD	Set default screen size; initially 10 lines above and 10 lines below PL with 2-line screen-to-screen overlap.
SE SL	Set maximum screen size; default depends on the type of terminal used.

Screen Mode Commands (read screen):

cntl Q	Quit screen mode.
cntl P	Go to previous screen.
cntl F	Go forward to next screen.
cntl S	Start next screen at cursor position.
cntl X	Start extra large screen at cursor position.
cntl C	Execute one EDIT line mode command and return to current screen (prompt with /).
cntl O	Copy line indicated by cursor below that line.
cntl K	Position cursor to set a line marker.
cntl A	Move cursor to first character on line. Reset margins.
cntl Z	Move cursor to last character on line. Reset margins.

Screen Mode Commands (without reading screen): They are the same as above except that the control characters are repeated (e.g., cntl Q cntl Q). For cntl C cntl C, a back slash (\) prompt is displayed.

Kill Trailing Blanks and Truncate Lines

BK	Kill trailing blanks for all lines. When the scratch file is written out, one blank may be left to eliminate zero length lines. All lines longer than the length set by the line-length option setting command will be truncated to the maximum line length set.
----	--

Run Program

RU	Run a program and return to EDIT.
----	-----------------------------------

Copy Screen

SC	Copy terminal display memory to EDIT work area.
----	---

Transfer to Command File

TR	Transfer to an EDIT command file.
----	-----------------------------------

Add a Line Marker

Kx Mark a line with label x (letter A thru Z). ":x" is used in line specification to point to the line marked.

Add Line Sequence Numbers

Add a 3-character ID and sequence numbers on columns 73 through 80.

Add Time and Date Information

TI Add a 30-character field with time and date information.

Add Time Stamp

A time stamp may be created on any line in the form: <YYMMDD.HHMM>. The right angle bracket must be either the last or the next to the last non-blank character on that line. The information is in two-digit form, showing the year, month, and day followed by hour and minute. This field will be automatically updated when EDIT replaces the file.

Terminate EDIT Session

EC	Exit and create new file.
ER	Exit and replace source file.
A	Abort EDIT session without replacing source file.
AS	Same as A but save scratch file.

File Input/Output

WR	Replace source file and remain in EDIT session.
WC	Create new file and remain in EDIT session.
FI	Input file to replace current source file.
M	Merge file specified to after PL.
L	Create or open list file specified.
K	Create or open list file specified.
FCS	Close source file.
FCL	Close list file.

Modification Recovery

UN	Undo a modification.
UY	Recover line(s) from the undo list.
SH UN	Show undo list.

Getting Started for New Users

Create a File

Begin an edit session with :RU,EDIT. A few messages will be displayed suggesting what you can do and then the EDIT prompt "/" is displayed with the cursor positioned next to it. You can now create a file by starting each line with a blank and ending it with a carriage return (<cr>). You can end the session with the end exit command, EC. For example:

```
:RU,EDIT
EDI18 : Use ? for help          (EDIT messages)
FI,namr specifies file to edit.
EOF
/ PROGRAM squareroot (input,output);
/   VAR
/     x : real;
/   BEGIN
/     read(x);
/     write(sqrt(x))
/   END.
```

If you have problems with your inputs, the section on character edit will help you. If you make a mistake by deleting or exchanging the wrong characters, use the UN command immediately to get the old line back. At any point during the edit session, you can always abort the session by entering A. A slash after the command will suppress the EDIT verification prompt (OK?).

Modify a File

To modify an existing file, you may include the file name in the EDIT program run string or you may input the file after getting the EDIT prompt. Once the file has been moved to the EDIT source work area, the first line is displayed. Now you are ready to modify your file. Refer to the appropriate sections in this chapter if necessary for the tasks you want to do. When editing is complete you can replace the file or create another file with the ER or EC commands respectively. You may also replace or create a file without leaving the editor, using WR or WC. For example:

```
:RU,EDIT,<file name>
or
:RU,EDIT

EDI18 : Use ? for help
FI,namr specifies file to edit.
EOF
```

```

/FI,TEXT::41
opened file TEXT::41
File is write protected
.MARGIN LEFT 7;MARGIN RIGHT 78
/
(Modify file)
:
:
/ER,TEXT:<security code>:41
closed file TEXT::41:4
end of edit
:

or

/WR,TEXT:<security code>:41
opened file TEXT::41:4
closed file TEXT::41:4
(EDIT returns to PL)
/

or

/EC PROG::41
created file PROG::41:12
closed file PROG::41:12
end of edit
:

or

/WC DATA::41
created file DATA::41:4
closed file DATA::41:4
(EDIT returns to PL)
/

```

If the file is write-protected, a message appears when you input the filename without the security code. The ER or WR command causes the message "incorrect security code <filename>" to appear. It is suggested that you immediately reenter the command specifying the proper security code to execute the command.

Getting Help

At any point in your editing session, you can get a brief description of the commands, the special characters, and other on-line explanations available. Use either H, HE, or ? to display:

Summary	/H
A single command	/H<command>
Abbreviation description	/H EX
Regular expression description	/H RE
Line specification description	/H,LS
(You need a delimiter after H, but not after ?)	
Pattern description	/hpa
Pending line edit description	/HPL
Recovery mode explanation	/H RM
Display date code of EDIT	/H DA
EDIT abort messages	/H AB

If you interface with the operating system and a "FMGR" error is encountered, you can get additional system explanation of the error by running the HELP program before encountering the next system error. For example:

```
/RU,MSITL
fmgr cloning error 67
Resume ED55A on
/RU,HELP
FMGR 067
PROGRAM NOT FOUND
THE PROGRAM TO BE EXECUTED WAS NOT FOUND AMONG THE SYSTEM ID SEGMENTS,
NOR WAS IT FOUND AS A TYPE 6 FILE ON A SYSTEM DISC. CHECK THE PROGRAM
NAME SPECIFIED FOR CORRECTNESS OR RELOAD THE PROGRAM. ON A HE (HELP)
COMMAND, THE FMGR 067 ERROR INDICATES THE PROGRAM HELP COULD NOT BE
FOUND. ON A WH (WHZAT) COMMAND, THE ERROR INDICATES THE PROGRAM WHZAT
COULD NOT BE FOUND.
Resume ED55A on
/
```

Displaying Information

EDIT commands that display information are: L, LN, LU, W, WN, WU, SH, LE, LI, SZ, HL, N, n and TI. Use of these commands is illustrated below.

<u>Task</u>	<u>EDIT command</u>
(L,LN,LU)	
List 20 lines (default #)	/L
List 10 lines with numbers from pending line	/LN10 (All subsequent lists will show numbers until the command LU is entered)

List 2 lines from line 50 unnumbered /50 LU 2
 List 56 lines from pending line /L 56
 List 5 lines from 2 lines before PL /-2,L,5

Note: EDIT is quite forgiving about what you enter between parameters unless it is confusing. Usually, you may enter one space, no space, or a comma. EDIT will let you know if it doesn't like your input. This is done with a ? and an up-arrow ^ pointing to the illegal field.

List 10 lines beginning with a line /'PROCEDURE' L 10
 containing "PROCEDURE" after PL

(W, WN, WU)

Check where you are in the file /W (Numbers are normally displayed unless turned off with WU.)

List 21 lines centered on line 57, /57-10,57+10 WU (All lists
 no numbers. from now on are not
 numbered unless turned on
 with WN.)

(LE)

Check PL length (characters) /LE
 Check line length of line 100 /100 LE
 Check 10 lines above pending line /-10 LE
 Search backward for ALIAS anchored /'^ALIAS'LE
 to window, then check line length.

(LI)

Check number of lines in file /LI

(SZ)

Check number of 16-bit words up to PL /SZ

(SH)

Show all defaults and options /sh all or /SH
 Show list file /sh L
 Show default source file /sh <ER or WR>
 Show default pattern, including that /SH <F, B, or D>
 defined in the line specification
 pattern
 Show default matching pattern and /SH <G, U, X, or Y>
 substitute string
 Show tab character and tab stops /SH T

(N)

Show pending line number /N

(n)

Show a particular line and make it PL /100

Go to a line 10 lines above PL /.-10, /-10, or /^10

How to Specify Line Range

Line specification is an option for many EDIT commands: B, CO, D, F, K, L, LN, LU, MO, S, U, W, WN, WU, X and all line editing commands. It is a range of lines specified by one or two parameters in front of the command. These parameters can be absolute line numbers separated by a space or a comma, line specification (LS) characters, or both. The default parameters are given in the description of the above commands (shown inside the brackets) in Chapter 3. They may also have offsets, + (below) or - (above) the line specified. The LS characters and their meanings are shown below:

.	Current line	- or ^	Backward from current line
\$ or >	Last line	+	Forward from current line
'PA'	Search forward for pattern PA	'PA'	Search backward for PA
*	Line number of the first line parameter		
:x	Line mark x (a-z, case folded)		

Examples:

Search the whole file:	/l\$ F/PA/
Find from PL to last line:	/. \$ F
Delete lines 10 to 59:	/10,59 K
List PL to 10 lines above last line:	/. \$-10 L
Exchange within line 1 to 10 line below PL:	/1.+10 X/Aug/Sept/
Go back 10 lines (and make it PL):	/-10 or /^10
Go forward 10 lines (and make it PL):	/+10
Go back 40 lines and show vertical window: (EDIT returns to PL)	/-40 W
Search forward for CAKE:	/'CAKE'
Search backward for CAKE (following above):	/``
Move 5 lines (start from 20 lines below PL):	/+20,*+5 MO
Go to last line (and make it PL):	/\$
Go to first line (and make it PL):	/1
Edit line 40:	/40 P/////1980
Edit 5 lines above PL:	/-5 P/////Aug
Insert line before line 10:	/10 I<text>
Move line x thru y to after PL	/:x :y MO
Mark line 10 with "A"	/10KA

Setting Tabs

Tab stops are set with the T command. Up to 10 stops can be specified. Once set, these can be displayed and tab stops adjusted local to the terminal set with either the TL or TS command. You can use the preset tab stops for program development. These are:

```

TA   for ASMB
TF   for FTN
TM   for Macro
TP   for Pascal
TL   for showing tab settings for line mode edits
TS   for showing tab settings for screen mode edits

```

Examples:

```

/HL
    ,,,,,/,,,,,1,,,,/,,,,,2,,,,/,,,,,3,,,,/,,,,,4,,,,/,,,,,5,,,,/,,,,,6,,,,/,,,,,7,,,,
/tl0,20,30,40
      T           T           T           TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
/tl
      T           T           T           TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT

/ts
      T           T           T           TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
/tp
      T  T  T  T  T  T  T  T  TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
/tf
      T  T  T  T  T  T  T  T  T  T  T  TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
/tl
      T  T  T  T  T  T  T  T  T  T  T  TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT

/

```

Note that TL and TS shift the tab stops by two columns. This is done so that the tab stops line up with the line mode edits or the screen mode edits. TL or TS sets the method of listing tabs by the tab-set command. A TL command will cause tabs to be listed and set at the terminal in the line mode positions, TS to the screen mode positions.

Setting Options

You can check the defaults and options by /SH. To change any of the options, you need to specify the new parameter(s) with the set option command SE. The following examples illustrate how to change these options. Note that the initial defaults are shown in parenthesis.

To turn regular expression capability on (off)	/SE RE on
To change line length to 80 (150) (Lines longer than 80 characters are truncated as they are edited or as the BK command is used. All input lines will be truncated to 80 characters.	/SE LE 80
To turn off case folding (on)	/SE CF off
To change search window to columns 7 through 21 (1,150)	/SE WC 7 21
To change screen size default to 40 lines (20) (Be aware of maximum size so that you don't lose the screen overflow protection)	/SE SD 20 20 1
To change maximum screen mode size to 30 lines (number is terminal dependent; check with SH SL)	/SE SL 30
To change vertical window to 30 lines (20)	/SE VW 20 10
To change anchor character to + (^)	/SE AC +
To change escape character ^ (\)	/SE EC ^
To change indefinite character to " (@)	/SE IC "
To change prompt character to) (/)	/SE PC)

NOTE: Be careful when you change these characters. For example, if you change the prompt character, don't forget to use the new prompt character everywhere the current prompt is required, e.g., in the P command.

To change the tab character to] (TAB key)	/SE TC]
To change command separator to ; ()	/SE CS ;
To suppress verification prompt (on)	/SE AS off
To turn off screen display functions (on)	/SE DF off
To stop unsuccessful matches at lower limit (PL)	/SE RT off

Character Edits

Editing on a line can be done with several commands:

- P - Edit on PL
- C - Edit on PL and advance to next line
- O - Copy and edit on PL
- G - Exchange patterns on PL
- Y - Exchange patterns on PL and advance to next line
containing match pattern
- Q - Local edit of PL
- R - Replace PL with text entered

The pending line edit sub-commands can be shown with /H PL. The R command replaces the pending line with whatever text you enter. The escape and tab characters can be used. To replace lines beginning with the letter U, these lines must begin with the escape character (\). This is so that EDIT won't interpret your input as a RU command. The P command needs the prompt character to indicate no-change in a column. If you have changed the prompt character, be sure to use the current prompt.

Delete Characters

You can delete characters using identical means in the P or C command. The difference between these commands is that P remains with the pending line and C advances to the next line.

Use cntl C (cancel) at the starting column and indicate the number of characters to be deleted by typing any characters. You can always do a vertical window check and go back to any line with the n command for corrections. If you make an error, entering the UN command immediately afterward will get the old line back.

Use cntl T to delete all remaining characters from the column where the command is entered.

Use cntl B to break up a line. At the point where the control character is entered, the remaining characters will be made into a new line, left-justified below the current line.

With the Q command, you can position the cursor to the first character to be deleted and use the terminal DELETE CHAR key. Check to make sure that the line is correct before pressing the return key. The line displayed on the screen will be read, replacing the existing one.

Use of these command is illustrated below. Note that the cntl character position is indicated by < at the appropriate column.

```

    abcdefghil2345
/p/////////xxxxx
    <cntl C>
    abcdefghi

    1234567890abcdefg
    TTTTTTT TTTTTTT
/-1
    1234567890abcdefg
/C/////////xxxxxxx
    <cntl C>
    TTTTTTT TTTTTTT (Next line displayed as PL)

    AAAAAAAAAAABBBBBBBBBBBB
/p/////////
    <cntl C>
    BBBBBBBBBBBB
/

/ AAAAAAAAAAABBBBBBBBBBBBCCCCCCCCC
/p/////////-----//<cntl T>
    <cntl C>
    AAAAAAAAAAABBB
/

/ ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
/p/////////afd;lkjfdlkjkljffj (Any character can be used as
    <cntl C> place holder.)
    ZZZZZZZZZ
/

```

Insert Characters

Inserting characters on a line is similar to deleting characters. You can use the same EDIT commands, P, C, or Q. Enter cntl S at the desired column and then the characters to be inserted.

With the Q command, use the INSERT CHAR key and move the cursor to the desired position before entering characters. See the examples shown below.

```

    aaaaaaaaaa
/p/////TTTTT
    <cntl S>
    aaaaaTTTTTaaaaa

```

The pending line commands can be used together on the same line.

Replace Characters

Characters can be replaced with the P, O, C, or Q commands. With the O, P or C command, you can simply use the current prompt to move to where you want and type in the replacement characters. With the Q command, use the cursor to get to the right place.

```
***** NOTICE *****
/P//////////E *****xx
                               <cntl T>
***** NOTE *****
```

Exchange Characters

Exchanging characters on a line can be done with the G, X, or Y command. The Y command makes an exchange on the pending line if there is a match and then finds the next line containing the pattern specified. The process can be repeated by another Y command.

```
the examples show character exchanges
/y/the/these/
00051 these examples show character exchanges
the examples
/Y
00070 these examples
the next pending line with a match
/
```

Note that you may specify the starting line for the Y command. You may go to line 1 and start the process from there.

If the line is listed with a line number, then an exchange was made on the pending line. If not, no exchange was made on the pending line. In both cases, the search for the next occurrence of the pattern will occur.

The Y command copies the exchange pattern to the default find pattern.

Line Edits

The line edit commands allow manipulation of one entire line of text at a time. Some pending line edit commands can also be used to modify part of a line, e.g., truncate, break, or extend a line. Line edits are described and/or illustrated below.

Add a Line

To add a line in front of the pending line: /I<line of text>

To add a line after the pending line: / <line of text>

To add a line after a known line: /lF/BEGIN/
 BEGIN
 / <line of text>

To add a line 14 lines above current PL: /-15
 / <line of text>

Truncate a Line

Use pending line edit command P (or C) and cntl T at the desired point to truncate the remainder of the line. For example:

```
Truncation example truncation example
/p////////////////////////<cntl T>
Truncation example
```

Note that the "<" character is positioned at the column where the cursor was when the control character is entered. You may also use the local edit command Q and the terminal editing keys to truncate a line.

Extend a Line

Use pending line edit command P (or C) and cntl X to extend a line. The cntl X command allows you to go to the end of a line quickly without moving the cursor there. Example:

```
Line extension
/p<cntl X> is illustrated here
Line extension is illustrated here
/
```

Trailing blanks on a line are stripped.

Delete Lines

A number of line can be deleted with the D or K commands. The K command is the normal (less dangerous) command to use. Immediately after execution of either command, you can undo the command by using the UN command. Lines deleted will then be restored.

Examples: (Asking prompt = on)

Delete one (pending) line:	/k	
Delete all lines in file:	/l\$k	or /l\$k/
	OK? yes	
Delete 14 lines from PL:	/k 14	or /k 14/
	OK? y	
Delete all lines from PL to line containing Program Count:	/D/Program Count/	
	OK?	
Delete all lines not containing ":ST" and suppress asking:	/D/:ST/A/	
Delete all lines containing "%" and suppress display of all lines deleted:	/l\$ D%/AQV/	

Join Lines

Two adjacent lines can be combined with the J command. You may need to do some pending line editing to separate words merged at the joint. This is due to the fact that EDIT works with even number of characters (two characters in one word) on each line. A blank is padded for lines containing odd number of characters.

Example:

```
/13
  1 2 3 4 5
  6 7 8 9 0
  2 3 4 5 6 7
/-3
  1 2 3 4 5
/J
  1 2 3 4 5 6 7 8 9 0
/J
  1 2 3 4 5 6 7 8 9 02 3 4 5 6 7
/
```

Remove Trailing Blanks

Remove trailing blanks from all lines in the file with the KB command. This command can be entered anywhere in the edit session. Odd length lines will be padded with one blank. An all-blank line will be truncated to two blanks.

Break Up a Line

A line can be broken up at some point and the remaining part moved to column 1. The pending line edit command P and cntl B are used.

Example:

```
xxxxxMake this part into a new line and left justify
/p      <cntl B>
Make this part into a new line and left justify
```

Copy Lines in Source File

One or more consecutive lines can be copied to after the pending line without destroying the lines copied. The quiet (Q) option can be used to suppress display of lines copied.

Example:

```
Copy one line:                /105 C0
Copy group of lines:          /1 100 C0 Q
    (without listing)
```

Move Lines

Moving one or more lines to after the pending line can be done with the M0 command. It works much the same way as the C0 command except that it deletes the lines moved from their previous locations.

Examples:

```
Move one line:                /100 M0
Move a group of lines:        /1 50 M0
```

Copy Lines on Terminal Screen

The lines shown on the terminal screen can be copied into the source file you are editing. The SC command copies everything in the terminal screen memory to after the pending line. It stops when 24 zero length lines are encountered. Information copied includes the SC command itself. You may want to remove locally all unwanted lines and modify lines if necessary before entering the SC command. Even before you press return, you can use the terminal edit keys to remove the SC command; then press return to get just what you need.

Display Control Characters

Whenever control characters in a file need to be modified or created, the screen mode can be used to display them on the terminal screen. In the screen mode, the local terminal display function is normally on to show the control characters. This is useful in setting special options on line printers such as the HP 2608 or 2601, in sending control to terminals (2521, 2645, etc.), or in program development.

Screen Edits

The screen mode commands can be displayed by H S. The screen mode commands are:

```
cntl Q - Quit screen mode.
cntl P - Go to previous screen.
cntl F - Go to following screen.
cntl S - Start next screen at current cursor position.
cntl X - Like cntl S but make next screen extra large.
cntl C - Execute one line mode command and return to screen mode.
cntl O - Copy. A copy of current line is inserted on the screen.
cntl K - Allow a line marker to be set.
cntl A - Move cursor to first character on line. Reset margins.
cntl Z - Move cursor to last character on line. Reset margins.
```

The set mark (cntl K) command places a colon in column 79 and moves the cursor to column 80 to allow entry of a letter. Entering the control character once causes the screen to be read. Entering it twice skips reading the screen and leaves the workspace unchanged. Thus cntl Q will read the screen and quit screen mode and cntl Q cntl Q (or cntl QQ) will abort screen mode.

Start Screen Mode Edit

The screen mode may be started from the pending line or any line specified. For example:

```
/S                (Start screen from pending line)
/100S             (Start screen from line 100)
/.-45S           (Start screen 45 lines before PL)
:RU,EDIT,<file>,S (Run EDIT and start screen from line 1)
/.$ S            (Start a large screen from current PL)
```

Determine Screen Size

Normally, the size of the screen is 20 lines with a two-line overlap from the prior screen. If you want a larger screen, you may use the cntl X command in moving forward. This will give you the maximum number of lines allowed on your terminal. The screen size can be checked with the "SH SD" command and the maximum lines allowed checked with "SH SL". The maximum number is used for screen overflow protection. If you change the screen size to a greater number, you will lose this protection. Change the screen size with the "SE SD" command. Specify three numbers to indicate the number of lines above and below the pending line and the number of overlap lines. For example:

```
/SE SD 30 30 1    (Screen of 60 lines with 1-line overlap)
/SE SD ,,20 5     (Screen of 30 lines with 5-line overlap
                  ",," uses the default value)
```

Move from Screen to Screen

While you are in the screen mode, you can move forward or backward to another screen of the same size (cntl F, cntl P). You also have the choice of either to replace the file with lines shown on the screen or to ignore the screen and leave your file unchanged. Entering a screen mode command once allows EDIT to read the screen and replace the lines in your file with lines read from the screen. Entering a screen mode command twice will ignore the screen.

You can move forward to another screen of maximum size allowed for your terminal with cntl X. It starts the next large screen at the cursor position.

If you want to start another screen at a particular line, you may position the cursor at that line and enter "cntl S" (or "cntl S cntl S" if needed). This will give you a screen starting at the line specified.

Normally, when you move to the next screen (either forward or backward), the cursor will be positioned at the center of the screen. For the S, SS, X, and XX commands, the cursor will be positioned at the top of the screen.

The screen mode commands are explained below.

cntl F - Moves forward to the next screen. The lines on the present screen will be read and used to replace the corresponding lines in your file. The next screen will be the same size as the present screen with a two-line (or the specified) overlap.

cntl F cntl F - Same as cntl F except that the present screen will be ignored and your file unchanged.

cntl S - Moves forward to the next screen starting at the line where the cursor is positioned. The screen overlap parameter is ignored.

cntl S cntl S - Same as cntl S except that the present screen will not be read and the file unchanged.

cntl X - Moves forward to the next screen which will be a large screen. The lines on the present screen will be read and used to replace those in your file. The screen size is dependent upon your terminal display memory size, ranging from 32 lines for a 2621 Terminal to 100 lines for a 264X terminal with 12K of memory. This command must be used each time you need a large screen. It is similar to the cntl S command in that the next screen will start at the line indicated by the cursor position.

`cntl X cntl X` - Same as `cntl X` except that the present screen will not be read and the file unchanged.

`cntl P` - Moves backward to the previous screen. The lines in the screen will be read and used to replace those in your file. The top two lines (or the specified overlap number) will be included in the next screen).

`cntl P cntl P` - Same as `cntl P` except that the screen will not be read and the file unchanged.

NOTE: If you want to read the screen, avoid holding down the letter key too long. Otherwise, the terminal key repetition feature may send an extra letter. EDIT takes no action if three or more letters are entered.

Extend Lines Beyond Screen Limit

In screen mode editing, the screen has a limit of 78 characters. To enter lines longer than 78 characters, use the cursor and place two periods at columns 79 and 80, then continue to enter text for the same line on the next line in your screen.

Copy Line

You can copy another line while in the screen mode with the `cntl O` command. The line indicated by the cursor will be copied below that line.

Execute an EDIT Command

EDIT allows you to get out of screen mode temporarily and execute one EDIT command line. The `cntl C` command in screen mode will get you the EDIT prompt `"/`. After entering an EDIT command, the current screen will be read before execution of the command. After execution of the command, EDIT returns to screen mode. If you don't want the screen to be read, enter `cntl C cntl C` instead of `cntl C`. In this case, you will get the `"\"` prompt. The two prompts are not affected by the SE PC (SET Prompt Character) command. Regardless of what the current prompt may be, the `cntl C` or `cntl C cntl C` command will display the `"/` or `"\"` prompt respectively.

Terminate Screen Mode

Terminate screen mode with either the `cntl Q` or `cntl Q cntl Q` command. The `cntl Q` command will return EDIT to the line after the last line in the screen. The `cntl Q cntl Q` command will return EDIT to the first line of the screen.

Search for Patterns

There are four methods you can use to search for a pattern. The F and B commands can be used to search for one line or all lines containing a specified pattern. The pair of single quotes used in line specification can be used to search for a particular line and then execute a line mode command if desired. The search pattern need to be defined only once. It can be omitted in subsequent searches.

- F - Finds a pattern starting from the line after the pending line or from the line specified. The line containing the pattern will become the pending line. If no match is found, EDIT returns to the current pending line (if RT is on).

This command is recommended for successive searches moving down through the file.

This command can also be used to find all lines containing the pattern specified (F/pattern/A). In this case, the lines found will be displayed with their line numbers. EDIT will return to the current pending line or, if the RT option is set to OFF, to the end of the file.

- B - Finds a pattern starting from the first line or from the line specified. Same as the F command except for the default find range. The B/pattern/A command is recommended for listing all lines containing the specified pattern.

'PA'<EDIT cmd> - Finds a pattern (PA) starting from the pending line to EOF and executes the EDIT command specified.

`PA`<EDIT cmd> - Same as above command except the search is backward from the pending line.

Exchange Patterns

Pattern exchanges throughout the whole file or a block of lines can be done with the X and U commands. The Y command (as well as the X command) can be used for pending line exchanges. The pattern to be matched and the substitute pattern need only be defined once. These patterns may be omitted in all subsequent similar exchanges.

Don't forget that EDIT initially has case folding (CF) on. You must set case folding off to exchange unique upper/lower case patterns. Also be aware that some patterns may be embedded in other characters. For example, if you specified TE as the match pattern and CF is on, the substitute pattern will be inserted into words such as test, text, substitute, etc.

Examples:

```
Exchange pattern to regular
expression in the entire file    /l$X/pattern/regular expression/
```

```
Exchange RE to PA from PL to EOF  /SE CF off
and suppress verification prompt  /,$X/RE/PA//
```

File I/O from Cassette

With 264X terminals with cassette units, you can list files to or input files from cassettes. You can either set up a file name for a particular cassette unit (e.g., LCTU for the left cassette tape unit; refer to the RTE Terminal User's Reference Manual for type 0 files) or use the legal LU number for the cassette unit. If you have zero length records (null lines with only the carriage return and line feed characters), EDIT will interpret this as an end of file and stop. You need to eliminate all null lines or write a short program that removes them or adds blanks to the beginning of the null lines and creates a file at the same time.

When you read from or write to the cassette unit, you must position the tape at the desired location. Otherwise, you may get the wrong file or write over another file.

To input files from cassette, use the FI (file input) command with the proper LU number. The M (merge) command can be used to add lines to an existing file from cassettes.

The list and kill commands can be used to write a number of lines or the entire file to a cassette. The ER or WR commands may also be used to write the file to a cassette using the cassette LU for the file namr.

List and kill commands will put two blanks before each line; the WR command will not. The current status of number listing applies to listing to LU's (LU). If line number listing is on (turned on by LN), all listings to cassettes will include list numbers.

Examples:

```
EOF
/WR,4
opened file 4::-4
closed file 4::-4
EOF
/

EOF
/ER,4
opened file 4::-4
closed file 4::-4
closed file EDIT31::41:4
end of edit
:

/l$ L 100 4                (List up to 100 lines)
EOF
/
```

```
/WR,CTU
opened file CTU::-4
closed file CTU::-4
EOF
/
```

```
EOF
/MCTU
opened file CTU::-4
closed file CTU::-4
EOF
```

```
/1$ L 200 4
IONR L* 4 E47 S 1 ***
```

```
S=91 COMMAND ?UP,47
EOF
/
```

Listing Lines to a Printer

If you need hard copy of a number of lines or the entire file, use the L command with the list device LU as the namr. If you want a record of the lines deleted with the K command, use the K command in the same manner as with the L command.

Examples:

```
Get copy of the entire file      /l$ L,,6
List to printer lines 1 to 150  /l 150 L,,6
Get copy of lines deleted        /l$ K,,6
```

If the list device is busy, you will get a prompt asking if you want to wait:

```
/l$ L 200 6
Device is locked. Is waiting OK? <NO>
Command not executed.
/
```

```
/l$ L 200 6
Device is locked. Is waiting OK? <Y>
EDI91 waiting for list device.
/
```

Running a Program from EDIT

To run a program from EDIT, enter RU followed by the run string. If you run another EDIT for any reason, be careful with the EDIT command separator (|) in the run string.

Examples:

To run the help program for additional error explanation:

```
/ec123
Illegal file name 123:::4:4
/ru,help
FMGR-015
ILLEGAL NAME
THE FILE NAME DOES NOT CONFORM TO THE SYNTAX RULES. CORRECT THE NAME
AND RE-ENTER THE COMMAND.

Resume EDI91 on CHAP1::41:4
/
```

To run another copy of EDIT:

```
/ru,edit,test,60S          (Run EDIT on file TEST, start
:                          screen mode at line 60)
/ER
closed file TEST::41:4      (Exit second copy of EDIT)
end of edit
Resume EDI91 on CHAP1::41:4 (Return to original EDIT)
/
```

Manipulating Files

Files can be opened or closed while you are in EDIT. Files can also be created, merged, read into the EDIT work area (scratch file) or written from the EDIT scratch file.

Create Files

Creating files without leaving the edit session can be done with the WC, L, or K commands. The WC command works in the same manner as the EC command except that it returns to the current pending line after creating the file specified. The L and K commands can create a new list. Use these two commands with caution because they will open a file and write to it if the namr specified already exists. With the L and K commands, you can append to an existing file by entering a + sign before the file name. EDIT, however, will issue a prompt in either case and will execute the command only if you answer yes. Prompt suppression for the L and K commands is not recommended.

Examples.

```
/WCEDFIL::41:18:4
created file EDFIL::41:18:4
closed file EDFIL::41:18:4
/
```

```
/1$ L 100 +namr
opened file NAMR::41:4
Appending to file.
OK? Y
posted file NAMR::41:4                (File left open)
EOF
```

```
/1$ L 50 namr
File already exists NAMR:::4:24
opened file NAMR::41:4
OK? no
Command not executed.
closed file NAMR::41:4:1
/
```

```
/1$ L 50 namr
File already exists NAMR:::4:24
opened file NAMR::41:4
OK? yes
posted file NAMR::41:4                (File overwritten)
EOF
/
```

```

/1$ L 50 NEWFIL
closed file NAMR::41:4:5          (List file was still open)
created file NEWFIL::41:4:24
posted file NEWFIL::41:4:24
EOF
/

/1$ L 50 NAMR
closed file NEWFIL::41:4:5
opened file NAMR::41:4
OK? n
Command not executed.
closed file NAMR::41:4:1
/

```

Open/Close Files

EDIT allows you to open or close a file observing the limitations of the operating system. This includes the source file you are editing or the list file you created or opened. The FCS and FCL commands are used for this purpose, FCS for source file and FCL for list file.

A file may also be opened with the L or K command with the purpose of appending or replacing the file with the file being edited.

The scratch file is always open while EDIT is running. The only way to close and save this file is with the AS command.

Replace EDIT Source File

If you are finished with one editing session and ready to start another editing session with a new file, use the FI command to overlay your source file in the work area. This command does not write to the current work space and therefore cannot be undone. If your old file has not been modified, you will not be prompted to verify execution of the FI command. Or you may suppress the prompt with a slash at the end of the EDIT command string.

The file name specified in the FI command will become the default source file namr for the ER and WR commands.

Dating Files

As you create or modify your files, you may want to date them. This can be done either manually with the TI command or automatically by creating a time stamp field on any line in your file. The TI command adds a 30-character field to the current pending line

starting at the column specified. Default starting column is column 1. Text outside the 30-character field is not affected. For example:

```
"Runit File .ADD EDTXT
/TI 30
"Runit File .ADD EDTXT      8:00 AM TUE., 26 AUG., 1980
```

EDIT will not update the time and date information. It can only be done with another TI 30 command on the same line. A time-stamp field can be created on any line. This field is:

<YYMMDD.HHMM>

where the year, month, day, hour, and minute are indicated with two digits. For example, two o'clock in the afternoon, July 4, 1980 is represented as <800704.1400>. This field must be enclosed with a pair of angle brackets with the right bracket the last or next to the last non-blank character on the line. This field will be updated with the system time each time EDIT replaces the file (i.e., ER or WR). If you do a WR, the time stamp in the source file in the work area is not updated. You will see the new date the next time you run EDIT with the original source file.

```
/          <222222.2222>      (Create dummy field.)
/WR
posted file TEST::41:4
          <222222.2222>      (Time stamp updated in TEST
                              but not in work file.)
/FI,TEST
closed file TEST::41:4
opened file TEST ::41:4
File will be time stamped      (Updated when last replaced.
                              <800905.0850> Will be updated again when
                              / it is replaced.)
```

The time-stamp updating option is initially on. Updating can be suppressed by including an option-setting command to turn time-stamp update off. For example:

```
:RU,EDIT,SPECS,SE TS OFF
```

In this case, the time-stamp update message is displayed but the update will not be done.

EDIT will not create the time stamp. If not included in your file, the time-stamp feature is ignored. Upon file input, EDIT will display a time-stamp update message if the time-stamp field is found in your file.

The time stamp feature should not be confused with the TI command which adds a field of 30 characters with the time and date information. This 30-character field will not be altered except with another TI command on the same line.

Scratch File Recovery

If the scratch file already exists, EDIT enters the recovery mode. An attempt is made to reconstruct the EDIT internal tables from information contained in the scratch file. This allows the data to be checked with the list or find commands or written to a file with EC or ER. If unable to reconstruct any of the internal tables, EDIT will abort and leave the scratch file unchanged. The name of the scratch file is displayed. You must purge the scratch file before another edit session can be run. (See appendix A for a description of the scratch file.)

If EDIT finds some inconsistencies in the scratch file, it will attempt to correct it. Depending on the nature of the inconsistencies, it may or may not be successful. In any case, you should not write over the original file with the recovered version without making a comparison between the two files.

The recovery mode can be terminated only by exiting EDIT. While in the recovery mode, the scratch file cannot be changed.

You can also evoke EDIT to recover a scratch file resulting from an EDIT session on another terminal. The run string is:

```
:RU,EDIT,-R, <scratch file namr>
```

If you abort the edit session in the recovery mode, the scratch file is purged. If you need to save the scratch file, you can abort with the AS command. However, you cannot avoid the recovery mode unless that scratch file is purged or recovered (with EC or ER).

A brief explanation of the recovery mode can be obtained by entering "H RM". You can also circumvent the recovery mode by using the run-string option that places the scratch file on another disc. This option is specified with -S::<disc>. For example, to place the scratch file on cartridge EK, enter:

```
:RU,EDIT,-S::EK, <file>
```

In this example, upon any abnormal EDIT termination, the scratch file will remain on cartridge EK. The next time EDIT is run, it will go to the default scratch-file disc to open a scratch file and thus will not enter the recovery mode.

Batch Mode Operations

Batch mode processing of EDIT commands can be accomplished in several levels with little or no operator interaction. You may create a batch file consisting of EDIT commands. This file can then be called with the TR command. Another means is to include a command string in the EDIT run string. You may also enter a string of commands in the interactive mode using the command separator. The number of commands you can enter is limited by the line length. If the command stack feature will be used, you can only use a command field of 79 characters because only 79 characters per line will be retained in the command stack.

Create a Command File

A command file is composed of lines containing EDIT commands. Each line may include one or more commands. Be careful with commands that will issue a prompt. You need to suppress the prompt with a slash. For example, a command file may be as follows:

```
SE CF OFF
1$ X/JSM/JSB/N/
1$ F/JSB/
-1
MSUBRTN
F
-1
MSUBRTN
F
-1
MSUBRTN
1$ L 100 6
ECEDTMP
```

The whole sequence may be:

```
:RU,EDIT,LEMON,TR,CMDFL1/
```

where: LEMON is the file to be edited
 CMDFL1 is the command file
 "/" suppresses the EDIT "OK?" prompt

Failure to execute any command will cause EDIT to return to the interactive mode. In the above example, EDIT will not make any decisions. If the F command did not encounter any match, the next two commands will still be executed. In the command file, commands that issue the "OK?" prompt need to be suppressed.

EDIT Run String

As you run EDIT from the operating system, you may include EDIT commands in the run string. The EDIT commands are separated by a "|". If you are using the TR command in the string, it must be the last command. The number of commands allowed is limited to the line length. If you use the command stack feature, do not exceed 79 characters in your run string. If you have commands that issue the "OK?" prompt, you need to suppress the prompt with a slash.

For example:

```
:RU,EDIT,LEMON,1$ X/JSM/JSB//|BK|SE CF OFF|1$ F/JSB/|-1|MSUBRTN|ER
```

```
:RU,EDIT,LEMON,1$ U// /Q/|ER
```

NOTE: In RTE-A, CI replaces spaces in the runstring with commas. Under FMGR, some characters (such as the colon) may be treated as delimiters and cause spaces to be dropped.

EDIT Command String

Multiple commands can be entered on one line during the interactive mode of editing. You can enter commands in the same manner as described above and execute a series of EDIT operations. The whole command string (up to 79 characters) is saved in the command stack.

In a command string with multiple EDIT commands, a failed command (such as no-match in a find command) will cause EDIT to ignore the next command and to return to the interactive mode.

Each command string may be repeated as many times as needed. This is accomplished by the repeat command (N) placed at the end of the string. For example, to repeat a command string five times:

```
/1F/^&EDIT/|G/&EDIT/%EDIT/|_4
```

Using Regular Expressions

Regular expressions are specialized patterns made possible by setting the RE option on. The special patterns use the set of metacharacters to define unique match/substitute pairs or search patterns. The metacharacter set is described below.

- . A period denotes any character on a line. It is a place holder for one character in the pattern. For example, the specified pattern X.Y will match X+Y, X*Y, XZY, XaY, X Y, etc.
- ^ An up-arrow at the start of a pattern specifies that the pattern is to start at the beginning of the window or the beginning of a line. If the ^ character appears any place other than the beginning of the pattern, it does not have any special meaning. It is taken as an up-arrow (^).

Examples:

1. Change ADDRESS at the beginning of line (window) to NAME.

```
/15
  ADDRESS  ADDRESS  NAME  ADDRESS
/SE RE ON
/G/^ADDRESS/NAME/
  NAME  ADDRESS  NAME  ADDRESS
```

2. Find "The ^ character"

```
/sere on
/F/the ^ character/
  the beginning of a line. If the ^ character appears
```

Note that ^ has the same meaning in the normal pattern specification. Note also that ^ is used in character class specification where it means to negate the pattern specified.

- \$ Specifies the end of the line or window, whichever is shorter. Trailing blanks are counted as characters. For example:

%\$ means to search for % at the last column of a line or window, whichever is shorter.

^PROGRAM<sp>*\$ means any line containing only PROGRAM.

^\$ means a zero length record (null line).

JSB\$ means to search for JSB at the last three columns of the window or line length limit.

The line length or window right limit can be checked with the LE or the SH WC commands respectively.

[] Specifies a class of characters. Any of the characters included inside the brackets can be a valid match. For example:

[xy]	means either x or y
[xyz]	means x, y, or z
[0-9]	means any number
[a-z]	means any lower case letter (CF off)
[A-Z]	means any upper case letter (CF off)

Note that in regular expression, the dash is accepted as a range specifier: "0-9" indicates all numbers from 0 through 9 and "a-z" indicates all alpha characters. It works only for alphanumeric characters.

[^] The up-arrow as the first character inside the bracket represents a negated character class. This means all except the characters included inside the brackets with the up-arrow can be a valid match. Used anywhere else inside the brackets means simply the ^ character. For example:

[^0-9] means any character except a number will be accepted as a valid match.

[^a] matches any character except the character a.

[a^b] matches a, ^, or b.

* A closure which defines a search for zero or more occurrences of the character specified. It extends to the longest match (e.g., ab* matches abbb in abbbx).

a* means to search for zero or more occurrences of a.
Note that this will match anything.

ABC* means zero or more occurrences of any of the character C can be accepted as a match, e.g., AB, ABC, ABCCC, etc. If several matches occur in a string, the longest one is chosen.

[a-z]* matches any string of lower case letters (including a null string) if CF is off.

[A-Z]* matches any string of upper case letters (including a null string) if CF is off.

[0-9]* matches any string of numbers.

[0-9]* matches any string of numbers.

. * matches an entire line (including null lines).

[a-z][a-z0-9]* matches any FORTRAN identifier.

(.*) matches any characters in parentheses.

When confusion arises due to various combinations of patterns in a line matching the specified pattern, the longest match is chosen by EDIT.

- + Transitive closure. Identical to * except that only one or more occurrences of the character defined will be accepted as a match (same as aa*). For example:

To change five lines	A	To	A
	AM		B
	AMM		B
	AMMM		B
	AMMMM		B

enter the following: /1 \$ X /aM+/B//

If * were used instead of + in the match field, the resulting lines will have all B's. Don't forget to turn RE on before using regular expressions.

- <n> Defines an exact pattern repeating one character n times. For example, x<4> matches xxxx exactly. Can be used as a place holder, e.g., .<5> specifies a 5-character field.

- @ Indefinite character match (identical to .*). Matches everything.

- :
- Transition between alphanumerics and other characters such as spaces, etc. Useful in specifying short words that may be embedded in longer words. For example:

To change OUT (but not OUTPUT) to INPUT

```
/SE RE on
/1$X/:OUT:/INPUT//
```

- {}
- Tagged field to be recalled in the substitute string. The pattern specified within the brackets will be remembered and recalled by &n, >n, or <n. For example:

```
/SE RE on
/1$ X/{X+Y}, {X-Y}/&1+Z, &2+T//
```

If a line contains "X+Y, X-Y", the effect of the above command string is to change this line to "X+Y+Z, X-Y+T".

&n Recalls n'th tagged field defined in the match pattern. The character n can be 1 through 9. &1 recalls the first tagged field and &2 recalls the second tagged field, etc.

>n Same as &n except that all lower case letters in the tagged field will be shifted to upper case.

<n Same as &n except that all upper case letters in the tagged field will be shifted to lower case.

Applications

This section provides examples of EDIT application. Most of the tasks shown use the metacharacters with regular expression turned on. Explanation of the regular expression patterns is given whenever necessary for clarification purposes.

The cases shown are not necessarily the only way to accomplish the task. There may be more than one means to do the same thing. For new users, they provide a starting point. Additionally, these examples provide further help on the use of regular expressions.

Move Left Margin of a Text File

The following example shows how to move the left margin 7 columns to the right. Regular expression may be on or off.

```
/1$ U //      /Q
```

The effect of this command is shown below.

```
MOVE LEFT MARGIN OF A TEXT FILE
```

```
The following example shows how to move .....  
right. Regular expression may be on or off.
```

Note that the block of text starts on column 8.

Convert a File to Upper Case

The EDIT commands are:

```
/SE RE ON  
/1$ X/@/>/
```

The @ character matches any character. The > character converts it to upper case.

Exchange Array Elements

Four arrays with their elements are shown as follows.

```
array 1[one,two,three];array 2[first,second,third]
array 3[one,two];array 4[first,second]
```

Change arrays 1 and 2 so that "two" and "second" appear in element 1.

```
/SEREON
/1$X/\[{{[^,]+},{[^,]+},{[^\\]]+}\]/[&2,&1,&3]
```

where: \ is the escape character that says to find [in the match pattern.

[^,]+ matches one or more occurrences of anything except ",".

{{[^,]+} is the first tagged field to be recalled by &1.

, between the two tagged fields is part of the match pattern.

{{[^,]+} is the second tagged field to be recalled by &2.

{{[^\\]]+} is the third tagged field that matches anything except a]. It is to be recalled by &3.

The match pattern is:

```
[anything but ",", anything but ",", and anything but "]" ]
```

The substitute pattern is [2nd tagged field,1st tagged field,3rd field]. When executed on the two lines of arrays, the first match is "one,two, three" and the next match is "first,second,third". The substitute pattern switches the second tagged field with the first. The effect of this command is shown below.

```
array 1[one,two,three];array 2[first,second,third]
array 3[one,two];array 4[first,second]
/sereon
95 $ X/\[{{[^,]+},{[^,]+},{[^\\]]+}\]/[&2,&1,&3]
OK? y
00095 array 1[two,one,three];array 2[second,first,third]

Limit      2 matches  CF  RE
array 3[one,two];array 4[first,second]
/
```

Create Procedure Files from Disc Directory Listing

The EDIT and match/substitute patterns used to create a transfer file from a disc directory listing is:

```
/sereon
/D/\+[0-9]* *$/AV          (Delete extents)
/1$ X/ *{[^ ]*}@/:ST,&1::XX,&1::YY/
```

Note that the terminal CAPS LOCK key must be up to upshift certain characters, e.g., "{" and "}" etc.

\+[0-9]* matches all the extents (+xxx).

* <sp>* matches one or more spaces after the extents.

AV options in the D command used to delete all lines found with extents.

<space>* matches the two blanks normally found preceding the directory listings.

{[^]*} is a tagged field that matches zero or more occurrences of anything other than a blank, which would be the file name in the directory listing.

@ matches zero or more occurrences of any character, which matches everything following the file name.

The effect of this sequence is as follows.

```
SAVER 00004 00009 BLKS
ALLEX2 00004 00008 BLKS
ALLSUM 00004 00004 BLKS
RDRERS 00004 00011 BLKS
TMP1 00004 00008 BLKS
SYSMGR 00004 00005 BLKS
DEERE 00004 00001 BLKS
GUIDEC 00004 00001 BLKS
WMS.JL 00004 00004 BLKS
ACCTS 00006 00082 BLKS
ACCT1 00006 00049 BLKS
ACCT2 00006 00051 BLKS
ACCT3 00006 00049 BLKS
ACCT4 00006 00048 BLKS
```

```

/SEREON
/1$X/ *{[^ ]*}@/:ST,&1::XX,&1::YY/
OK? yes
00001 :ST,SAVER::XX,SAVER::YY
00002 :ST,ALLEXP::XX,ALLEXP::YY
00003 :ST,ALLEX2::XX,ALLEX2::YY
00004 :ST,ALLSUM::XX,ALLSUM::YY
00005 :ST,RDRERS::XX,RDRERS::YY
00006 :ST,TMP1::XX,TMP1::YY
00007 :ST,SYSMGR::XX,SYSMGR::YY
00008 :ST,DEERE::XX,DEERE::YY
00010 :ST,GUIDEC::XX,GUIDEC::YY
00011 :ST,WMS.JL::XX,WMS.JL::YY
00012 :ST,ACCTS::XX,ACCTS::YY
00013 :ST,ACCT1::XX,ACCT1::YY
00014 :ST,ACCT2::XX,ACCT2::YY
00015 :ST,ACCT3::XX,ACCT3::YY
00016 :ST,ACCT4::XX,ACCT4::YY

Limit      16 matches  CF  RE
:ST,ACCT4::XX,ACCT4::YY
/

```

Find all Begin-End Pairs in Pascal Programs

The EDIT command to find all begin and end pairs in Pascal programs are:

```

/SE RE ON
/B/:[BE][EN][GD]I*N*/A

```

: means transition between alphanumeric characters and other characters, i.e., space, etc.

[BE] matches B or E.

[EN] matches E or N.

[GD] matches G or D.

I* matches zero or more occurrences of I (BEGIN or END).

N* matches zero or more occurrences of N.

A is the option that displays all lines found with BEGIN or END.

Note that the above search pattern also matches BEGIIINNNNN, ENDIN, EEDI, BNG, ENG, etc. However, these are normally not found in Pascal programs.

Find Unlabeled Format Statements

To find unlabeled format statements:

```
/SE RE ON  
/1$ F/^[^C0-9] *[^0-9]+FORMAT/A
```

Find Assignments to Buf

To find assignments to BUF:

```
/SEREON  
/1$ F/^[^C]@:BUF: *=/A
```

Find Blank Lines

To find blank lines:

```
/SEREON  
/B/^[^$]/A
```

Find Unmatched Brackets

To find unmatched left or right brackets:

```
/SEREON  
/1F/\{[^\\]*$/A      (Finds left brackets not followed  
                      by a right bracket)
```

or

```
/1F/^[^\\{]*\}/A     (Finds right brackets not preceded  
                      by a left bracket)
```

Add Line Numbers to a BASIC Program

The ID and sequence command (#) can be used to add line numbers to BASIC programs. The sequence numbers appear on columns 73 through 75. In the example shown below, they are shifted left to be included within the right margin of the page.

```
/# 10
OK? YES
EOF
/1$L
    FOR I=1 TO 10                                00010
    PRINT "I="I,"I^2="I*I                        00020
    NEXT I                                         00030
    END                                           00040
/SEREON
/1$X/{@} {[^ ]*}/&2 &1//
00001 00010 FOR I=1 TO 10

00002 00020 PRINT "I="I,"I^2="I*I

00003 00030 NEXT I

00004 00040 END

Limit      4 matches  CF  RE
00040 END

/KB
EOF
/1$L
    00010 FOR I=1 TO 10
    00020 PRINT "I="I,"I^2="I*I
    00030 NEXT I
    00040 END
EOF
/
```

Chapter 3

EDIT Commands

Introduction

The EDIT commands are given in alphabetic order with the special characters at the end of the chapter. A brief description is given for each command. The format of the command is shown in a box. The line specifications, parameters, options, and defaults are described below the box. Interaction with other commands and EDIT options are also included for the commands when applicable. Examples are provided to demonstrate the usages of each command. The examples show you what you can do at the terminal. The effects or results are usually not shown. You will have to do them to see what happens. The examples are given in many forms to show the flexibility of EDIT in accepting either upper or lower letters in the command strings with or without delimiters.

A (Abort EDIT Session)

Aborts the edit session leaving the original source file unchanged. No parameters are required for this command. EDIT may issue the "OK?" prompt and a YES answer (Y or YE is also acceptable) is required to execute this command. The prompt may be suppressed with a / but use this feature with caution. The prompt is a precaution for errant fingers.

```
+-----+
|                                     A                                     |
+-----+
```

INTERACTION WITH OTHER COMMANDS: None.

COMMENT: If the source file has not been altered since the original read or the last WR or WC command, the prompt OK? will not be issued. The abort command will be executed immediately.

EXAMPLES:

```
/A
OK? N
Command not executed.
/
```

```
/A
OK? Y
EDIl8 aborted by user
closed file TEST::41:3
end of edit
:
```

```
/A/
EDIl8 aborted by user
closed file TEST::41:3
end of edit
:
```

B (Find a Pattern)

Searches the source work area for a line containing the pattern specified. When a match occurs, the line found becomes the pending line. If no match is found (or in a multiple search), EDIT returns to the current pending line if RT is on. If RT is off, the new pending line is the line after the second range specification.

```
+-----+
|           [1][$]B/pattern/[A][V][Q][N]           |
+-----+
```

- [1][\$] - Optional range. Can be absolute line numbers or the line specification characters with offset (e.g., \$-20 means 20 lines before the last line). Default is from beginning to end of file. Line numbers must be separated by a space or comma. The default first line is indicated by ",", i.e., ", 10" specifies a range from line 1 to line 10.
- / / - Delimiter for pattern specification. Can be any punctuation marks except commas or spaces. Second delimiter may be omitted if no options are used.
- pattern - Search pattern. Follows all rules for pattern specification. If omitted, the last pattern specified in B, F, or D command will be used. The default can be checked with "SH <B, F, or D>"
- [A] - Optional multiple search. Displays all lines found with at least one match. A message is displayed to show the total number of matches found. CF and RE are also displayed if turned on.
- [V] - Optional reverse match. Search lines NOT matching pattern specified.
- [Q] - Optional display suppression. Useful in conjunction with [A] to show only the number of matches found.
- [N] - Optional No-window parameter. Allows match anywhere on a line. Default is search only within the horizontal window columns.

INTERACTION WITH OTHER COMMANDS:

Following options affect the B command:

RE on/off - On to allow use of metacharacter set to search for regular expressions.

RT on/off - On to return multiple search or no match to pending line,
off to return to the line after range limit.

CF on/off - Initially on to ignore upper/lower case distinction. Needs
to be turned off to differentiate upper and lower case
letters.

COMMENTS: In order to use this command for successive single
searches, specify the pending line as the first line
(default is from line 1).

EXAMPLES:

/B/Chapter 1/ Chapter 1 General Information /K /.\$B	Go to a particular line, delete it, and go to the the next line containing the same pattern.
/B/JSB/A	Find all JSB statements.
/B/WARNING/AV	Find all lines NOT having the word WARNING.
/B/WARNING/AQ	Check the total number of warning statements.
/SE RE ON /B/^\$/	Search for zero length record.
/SE RE ON /B/^ *\$/ (space between ^ and *)	Find all blank lines including null lines.
/B/^Test/	Find "Test" at begining of search window.
/b/Xhe/N	Find "Xhe" anywhere on a line.
/l 100 B/Xhe/A	Find all lines with Xhe between lines 1 and 100.
/SE CF OFF /B/XXxx/A	Find all occurrences of XXxx. If CF is left on other patterns might be found, xxXX, XxXx, etc.

C (Edit Pending Line and Advance Line)

Allows editing of the pending line and advances the pending line following the edit.

```
+-----+
|               C<text>               |
+-----+
```

text - Replacement text. A slash or current prompt can be used to preserve an existing character between changing text. Addition and deletion of text can be done by using the line editing control characters. If omitted, the pending line will be advanced one line and displayed. If the current prompt is changed from the slash to another character that character must be used instead of the slash.

INTERACTION WITH OTHER COMMANDS:

The UN command can be used immediately to negate the C command.

Control characters used for pending line editing:

cntl B - Break the line at this position. Move remaining text to column 1 of the next line.

cntl C - Delete characters.

cntl R - Replace characters. Used after cntl C to replace characters on the same line.

cntl S - Insert character.

cntl T - Truncate line.

cntl X - Extend line, adding characters to the end of the line.

/ - The slash (or current prompt) leaves the character in that position unchanged.

EXAMPLES:

```
    Illustrating breaking of a line into two
/C//////////<cntl B>
    New pending line
/-2 L3
    Illustrating
    breaking of a line into two
    New pending line

    Deletion example zzzzzzzzzzzzzzzzz
/C//////////xxxxxxxxxxxxxxxxxxxx
                        <cntl C>
    New pending line
/-2 L2                                (Go back 2 lines
    Deletion example                    and list 2 lines)
    New pending line

    Next is the replacement example
/C//////xxxxxxxxxxxxxxxxxxxx<cntl R>EXAMPLE
                        <cntl C>
    New pending line
/-1 L2
    Next EXAMPLE
    New pending line

    Insert character ample
/c//////////<cntl S>ex
    new pending line
/-1 L2
    Insert character example
    New pending line

    tera googol googoo
/c//////////<cntl T>
    new pending line
/-1 L2
    tera googol
    new pending line

    extend line example
/c<cntl X> is given here
    new pending line
/-1 L2
    extend line example is given here
    new pending line
```

CO (Copy Lines)

Copies lines in the range specified, inserting them after the reading

line. At least one range parameter must be specified to differentiate this command from the C command. Lines copied are not altered.

```
+-----+
|               L1 [*] CO [Q]               |
+-----+
```

L1 - Required range parameter. Specifies the first line to be copied.

[*] - Optional second range parameter. Specifies the last line to be copied. If omitted, only one line will be copied.

[Q] - Optional display suppression. Lines copied will not be listed.

INTERACTION WITH OTHER COMMANDS: UN

The UN command can be used immediately to negate the CO command.

EXAMPLES:

/1	Go to beginning of file.
11111ABCDE	
/L	List 20 lines or to EOF
11111ABCDE	whichever comes first.
22222FGHIJ	
33333KLMNO	
44444PQRST	
EOF	File has only 4 lines.
/1 4CO	Copy lines 1-4.
11111ABCDE	
22222FGHIJ	
33333KLMNO	
44444PQRST	
/1 4 CO	Copy lines 1-4 again.
11111ABCDE	
22222FGHIJ	
33333KLMNO	
44444PQRST	

D (Delete Lines)

Deletes a block of text from the line specified in the range parameters to the line containing pattern specified. The line containing the match is saved. This command can, if the V option is selected, delete only lines containing specified pattern.

```
+-----+
|          [.+1][$] D/pattern/[A][V][Q][N]          |
+-----+
```

[.+1][\$] - Optional range parameters. May be absolute line numbers separated by a space or line specification characters with or without offset. If the first parameter is omitted, the current line is deleted regardless of match and searching starts at the next line. If the second parameter is omitted, default is to the last line. If only the last line is to be specified, a "," must be used to show the default.

/pattern/ - Pattern to be searched. Follows the rules for pattern specification. The slashes are delimiters required but they may be any punctuation marks except commas and spaces. The second delimiter may be omitted if no options are used. Defaults to the last pattern specified for F, D, or B. Check default by:

/SH <B, D, or F>

[A] - Optional multiple search. Displays all lines with at least one match with line numbers and all lines deleted marked by a tilde (~). The total number of matches (lines saved) is also displayed followed by CF and RE if they are on. The new pending line is the line past the lower range limit.

[V] - Optional reverse match. Deletes only lines containing pattern specified.

[Q] - Optional display suppression. No listing of matches or deleted lines.

[N] - Optional No-window parameter. Allows match anywhere on a line. Default is search only within the horizontal window columns.

INTERACTION WITH OTHER COMMANDS:

The UN command can be used immediately to negate the D command.

Pattern specified is the default for B, D, and F commands.

Following options affect the D command:

CF - Case folding is initially on to ignore upper and lower case distinction. CF must be turned off to differentiate upper and lower case letters. Turn CF off with "SE CF off".

RE - Regular Expression must be turned on to allow use of the metacharacter set.

COMMENT: If range is not specified, the current pending line is always deleted even if a match is found there.

This command issues a prompt and only a y(es) reply can execute it. The prompt may be suppressed with a slash after the second pattern delimiter (e.g., /PA//).

EXAMPLES:

/l\$ D/&/ (Delete all lines from line 1 to line containing &)

/l\$ D/&/A (Delete all lines not containing &)

/l\$ D/&/AV (Delete all lines containing &)

 pending line

/D /line/

OK? yes

~ pending line (No line range, delete PL only)

 line after PL (Line matched)

/

EC (Exit and Create File)

Ends the edit session and creates a file.

```
+-----+
|                                     EC<file descriptor>                                     |
+-----+
```

(Refer to "File Specification" in Chapter 1 for details.)

INTERACTION WITH OTHER COMMANDS: None.

< text deleted >

EXAMPLES:

/ECEDIT2:YL

/EC,LEMON

/EC EDEXMP:-1:-41

/EC TEST:YL:SP

/ECGAMES::41

/ECGAMES::41

File already exists GAMES::41 (Duplicate file name)

/

/EC1GAME

Illegal file name 1GAME

/ec JOY

created file JOY::41:4

closed file JOY::41:4

end of edit

(EDIT accepts either U/L case,
leading blanks are ignored.)

/ECbug:-1:-45:4:400

(Create a read/write protected
file 400 blocks in size)

/ECX:XX:YL

(Create a write protected file)

/EC /DOC/REPORTS.TXT

(RTE-A Only)

ER (Exit and Replace File)

Ends the edit session and replaces a file with the newly edited file.

```
+-----+
|                                             |
|                               ER[file descriptor]                               |
|                                             |
+-----+
```

(Refer to "File Specification" in Chapter 1 for details.)

INTERACTION WITH OTHER COMMANDS:

The FCS command removes the default source file name so that namr must be specified in ER.

< text deleted >

EXAMPLES:

```
/ER                                     (Replace source file.)
closed file EDLST::41:4
end of edit
:

/ER EDTMP                             (Replace another file.
opened file EDTMP::41:4                Source file unchanged.)
closed file EDTMP::41:4
closed file EDLST::41:4
end of edit
:

/EREDTMP                             (Attempt to replace file with
opened file EDTMP::41:4                security code.)
Illegal access EDTMP::41:4
closed file EDTMP::41:4
/

/ER EDTMP:YL:41                       (Replace file with security
opened file EDTMP:YL:41:4              code.)
closed file EDTMP:YL:41:4
end of edit
:

/er XXXXXX                           (Attempt to replace non-existent
No such file XXXXXX                   file.)
/

/ER BIG_FILE.TXT::DR                 (RTE-A only)
opened file /DIR/BIG_FILE.TXT
closed file /DIR/BIG_FILE.TXT
end of edit
:
```

F (Find a Pattern)

Finds one or more lines containing a pattern matching the specified pattern within the search window. A match may be either the same or not the same as the specified pattern. For a single search, the matching line becomes the pending line. For multiple searches (A option selected), returns to either the current pending line (initial condition) or the line below the lower range limit (RT off).

```
+-----+
|          [.+1][$] F/pattern/[A][V][Q][N]          |
+-----+
```

[.+1][\$] - Range parameters. May be absolute line numbers separated by a space or comma with or without offset. Default is the line after the pending line to the last line in the file. The first line default can be indicated by ",".

/pattern/ - Pattern to be searched. Follows the rules for pattern specification. The slashes are required delimiters but they may be any punctuation marks except commas and spaces. The second delimiter may be omitted if no options are used. Default is the last pattern specified for B, D, F, '', or `` command. Check default pattern by:

/SH <B, D, or F>

[A] - Optional multiple search. Displays all matches found. A message shows the total number of line with matches and the options affecting the search (CF and RE).

[V] - Reverse match. Find lines not containing pattern specified.

[Q] - Optional display suppression. No listing of matches. If A is specified, shows only the total matches message.

[N] - Optional No-window parameter. Allows match anywhere on a line. Default is search only within the horizontal window columns.

INTERACTION WITH OTHER COMMANDS:

Pattern specified will be the default also for the B, D, and the line specification commands (`` and ``).

Following options affect the F command:

- CF - Case folding is initially on to ignore upper and lower case distinction. CF must be turned off to differentiate upper and lower case letters. Turn CF off with "SE CF OFF".
- RT - Returns multiple search or no match to current pending line if RT is (initial condition), and to line after last line specified or EOF if RT is off.
- RE - Regular Expression must be turned on to allow use of the metacharacter set.

COMMENTS: Multiple commands may be entered on the same command string separated by |. If a search command fails to find a match, the rest of the commands in the command string will not be executed.

EXAMPLES:

```
/l$ F/<@>/A                    (Find all angle bracket pairs)

/lF/BEGIN/A

/lF/%EDIT1/|K                   (Find %EDIT1 and delete line)

/SE CF off

/lF/Chapter/N                   (Find Chapter anywhere on a line)
```

FCL (Close List File)

Closes list file opened or created with the L or K command. This command allows access to the list file by others without leaving the editing session.

```
+-----+
|                                     FCL                                     |
+-----+
```

INTERACTION WITH OTHER COMMANDS:

The L or the K command opens (or creates) the list file by specifying a file. The list file, if opened, can be checked with:

/SH L

COMMENTS: None.

EXAMPLES:

```
/L 200 wow::4l                                (Create list file called WOW.)
created file WOW::4l:4
posted file WOW
  (PL is moved down 200 lines)

/FCL                                           (Close list file.)
closed file WOW::4l:4

/L200 wow::4l                                (Re-open and overwrite WOW)
opened file WOW::4l:4
OK? yes
posted file WOW::4l:4:4

/L 200 + WOW                                  (Append to WOW.)
closed file WOW::4l:4
opened file WOW::4l:4
Appending to file.
OK? y
posted file WOW::4l:4
```

FCS (Close Source File)

Closes the source file without any changes. This command allows tasks such as disc packing to be done.

```
+-----+
|                      FCS                      |
+-----+
```

INTERACTION WITH OTHER COMMANDS:

This command affects the default file name for the ER and WR commands

File name must be specified for these commands. The default source file can be checked by:

```
/??      or
/SH ER   or
/SH WR
```

The default source file name is always displayed at the bottom flag line in screen mode, even if it is closed.

COMMENTS: This command can be used to prevent accidentally entering ER or WR. It does not modify the source file.

EXAMPLES:

```
/sh er
ER or WR..... =FCL::41:3
```

```
/fcs
closed file FCL::41:3
EOF
```

```
/sher
ER or WR..... =
```

```
/er
? ^
```

```
/wr
? ^
EOF
```

FI (File Input)

Replaces the source file with another file. This command allows editing of a new file without aborting the editor. It deletes all lines from the work space and reads in the file specified.

```
+-----+
|               FI<file descriptor>              |
+-----+
```

(Refer to "File Specification" in Chapter 1 for details.)

INTERACTION WITH OTHER COMMANDS:

The default source file for ER and WR is changed to the new file. It may be removed by the FCS command.

COMMENTS: The input file may be a type 0 file (or spool file). A prompt "OK?" is issued as a precaution before this command is executed. A yes executes this command. However, the prompt may be suppressed with a /. Also, if the source has not been modified since the original read, WC, or WR command, the FI command will be executed without the prompt. This command cannot be undone with the UN command.

EXAMPLES:

```

/FI,NWFL                                (Edit new file NWFL)
OK? yes
closed file ODFL::41:4
opened file NWFL::41:4
    INTRODUCTION                        (1st line of file)

/SH ER                                  (Check default source file.)
ER or WR..... =NWFL::41:4

/FI X                                  (Edit new file X.)
closed file NWFL::41:4
opened file X::41:4
    11111ABCDE

/SH ER
/ER or WR..... =X::41:4

/??
EDI18  on X::41:4
/

/FI OLD FILE.TXT                        (RTE-A only)

```

G (Character Exchange on Pending Line)

Exchanges a pattern with a new pattern over a specified range. The default range is the current line. There is no listing of exchanges.

```
+-----+
|          [.] [*] G/pattern/substitute/[N][R][S]          |
+-----+
```

[.] [*] - Optional range. May be absolute line numbers separated by a space or line specification characters with or without offset. If both are omitted, default range is one line only, pending line. If only the last line is to be specified, a "," may be used to show the default (pending line).

/ / / - Delimiters for pattern/substitute. May be the current prompt or any other punctuation mark (except commas and spaces). The last delimiter may be omitted if no options are used. All three are required if any option or OK? prompt suppression is used. The default pattern and substitute can be used by omitting the delimiters and patterns. If omitted, the last pattern specified for G, U, X, or Y will be used. The default pattern can be checked with SH <G, U, X, or Y>; the substitute string will also be shown. To default the pattern but specifying an option, enter G,,option. If a null pattern is entered, the F command pattern is used.

pattern - Pattern to be searched. Follows the rules for pattern specification. If RE is turned on, the metacharacters can be used for unique pattern matches. If omitted, the pattern previously defined with G, U, X, or Y is used. Default can be checked with:

/SH <G, U, X, or Y>

substitute- Substitute pattern. Replaces the match pattern described above. This pattern may be longer or shorter than the match pattern. EDIT will insert or delete characters as required to fill the line.

[N] - Optional No-window parameter. Allows match anywhere on a line. Default is search only within the horizontal window columns.

[R] - Optional. Removes zero length records (null lines).

[S] - Optional Single exchange parameter. Permits only one exchange per line.

INTERACTION WITH OTHER COMMANDS:

The UN command can be used immediately to negate the G command.

The default pattern and substitute strings are common to the G, U, X, and Y commands. The latest one defined will be the default for all these commands.

COMMENTS: This command is the same as X without listing.

EXAMPLES:

```
    GRA2ITY
/G?2?TU?
    GRATUITY

/ I8ITALL
/G,8, ATE ,
? ^                               (Comma is an illegal delimiter.)
/G/8/ ATE /
    I ATE ITALL
/G/IT/IT /
    I ATE IT ALL

/ WOMBAT
/g/w/C/
    COMBAT
/

    WOMBAT      WOMBAT      TOMCAT
/SE WC 1 8
/G/W/C/S
    COMBAT      WOMBAT      TOMCAT
/

    (A+B)X(C+D)=2000              (Change X to /)
/G ?X?/
    (A+B)/(C+D)=2000
/
```

H (Help)

Provides a brief explanation of EDIT commands and selected items. The question mark (?) can be used in place of H. Default is a summary of the commands and special characters for line and normal pattern specifications.

```
+-----+
|               H[E] [command]               |
+-----+
```

command - Any of the EDIT command entered immediately after H (or ?) will display the command syntax of the command. A space or a "," may also be used as a separator.

NOTE: Use a delimiter (a comma or space) with H to avoid confusing EDIT. The ? does not need a delimiter.

Additional explanations available:

EX - Describes abbreviations used.

PA - Describes rules for pattern specification.

PL - Describes special control characters used for pending line edits.

RE - Describes special characters used for regular expressions (special patterns).

LS - Describes line specification characters.

HE,ALL - lists all help messages.

INTERACTION WITH OTHER COMMANDS:

H does not affect the UN command. It can be used between an exchange command and the UN command without affecting the error correction.

COMMENTS: None.

EXAMPLES:

```
/h h
H [command] or ? [command]
Give help about commands.
```

```
/he r
[.] Rtext
Replace current line. Escape character applies;
if 'U' is the first character in the line it must be escaped.
```

/h,e

No help for E . Use ? for general help.

/H D

[.+1][\$] D /pattern/ [A][V][Q][N]

Delete until pattern is found.

If the first line spec is not given then always delete the current line regardless of pattern match on current line.

/H EX

Abbreviations:

OK? - Some commands ask before execution by prompting with this.

Asking may be suppressed by terminating a command with the current prompt character.

[xx] implies an optional parameter, the default value is give inside the brackets.

Q - Quiet. An option on some commands to suppress listing.

A - All. An option on B, F, and D to match all occurrences.

V - Reverse. Reverse the match sense for find commands.

N - No window. Allows match anywhere on a line for B, F, D, X.

S - Single. Permits at most one exchange for X and Y.

cntl - The CNTL version of the following letter.

* pattern - Pattern to be searched for.

n - Positive integer less than 32768.

namr - File name[:security[:cartridge[:type[:size]]]].

* re - Regular expressions.

* pl edit - Pending line edit using special control characters.

Additional help is available on the starred items. Spaces or a comma may be used as a delimiter when parameter separation is ambiguous. Two commas together specifies the default value for a parameter should be used.

/H PA

Patterns

The string of characters to be found during a search. Normal patterns are described here, see ?,RE for help on regular expressions. Patterns start and stop with a delimiter which may be any punctuation character except comma or space. If the field is started with a '^' then the search is anchored to the start of the window; otherwise the match may occur anywhere within the window columns. The window always applies to line specification searches. It may be turned off with the N option on find and exchange commands. A '@' character anywhere in the pattern means zero or more characters may be skipped during matching on this line, and the shortest possible match is used for non-RE matching. A "\" is the escape character, it is not part of the match but instead removes any special meaning from the next character. Use '\@' or '\\\' to find '@' or '\' respectively.

/H LS

Line specifications.

Many of the commands have optional line specification in front of them. These may be the absolute line numbers or one of the special characters. They may also have + or - offsets. For example to list the last 20 lines in a file use (the slash is Edit's prompt):

/\$_-19 1

Special characters are :

- . current line
- \$ last line
- > same as \$
- backward relative to current line
- ^ backward relative to current line
- + forward relative to current line
- * line number of the first line spec. Legal only in the second spec
- 'pattern' search forward for the pattern
- `pattern` search backward for the pattern

If a null search pattern is given (' ' or ``) it defaults to the F command pattern. If a pattern is given it becomes the next default.

/H RE

Regular Expression - A class of string specifications.

Examples :

To change the word IN to INPUT but not LINE to LINPUTE use :

X/:IN:/INPUT/

To change 'getc(xxx)' to 'getch(xxx,file)' where xxx can vary use :

X/getc([[^]]*)/getch(&1,file)/

Note that this will not work if xxx contains a right parenthesis.

Regular expressions are enabled with a SE RE ON command.

Metacharacters are used to denote special field types. Any character can be reverted (escaped) to itself by preceding it with a "\". The metacharacters are :

- . any character except the end of a line
- ^ beginning of the window (line)
- \$ end of the line or window, whichever is shorter
- [xyz] character class (any one of these characters)
- [^wxy] negated character class (all but these characters)
- * closure (zero or more occurrences of the previous pattern)
- + transitive closure (one or more occurrences)
- <n> repeat previous pattern n times
- @ indefinite character match (shorthand for .*)
- :
- {xyz} tagged field to be recalled by &n in the substitute string
- &n n'th tagged field; used only in the substitute string
(1 <= n <= 9; '&' by itself is the matched field)
- >n same as &n but shift substitute string to upper case
- <n same as &n but shift substitute string to lower case

A dash between alphanumerics in a character class specifies a range such as [0-9],[A-Z], or [A-Z0-9]. Character classes may also include escaped characters such as [^\] which means the class [^ or \]. Closures extend to the longest possible match.

HL (Header Lines)

Displays a header with tick marks to indicate column positions.

```
+-----+
|               HL               |
+-----+
```

INTERACTION WITH OTHER COMMANDS: None

COMMENT: Note that the command is overlaid when the header is displayed.

EXAMPLE:

```
    '///'1'///'2'///'3'///'4'///'5'///'6'///'
/
```

I (Insert Line)

Inserts a line of text before the current pending line. It can be used to insert a line before any line specified.

```
+-----+
|               [.] I<text>               |
+-----+
```

[.] - Optional line specification. Specifies where the line of text is to be inserted. Default is to insert before the pending line.

<text> - Any text to be inserted. If no text is entered, the inserted line is a zero length line.

INTERACTION WITH OTHER COMMANDS: UN

The UN command can be used immediately to negate the I command.

COMMENT: EDIT returns to the pending line before insertion of new line.

EXAMPLE:

```
    LINE ONE
  / ILine to be inserted
 /-1L2
    Line to be inserted
    LINE ONE
  /
```

J (Join Lines)

Combines two lines. The current line and the following line are combined into one line and displayed as the current line.

```
+-----+
|                                     |
|                                     |
+-----+
```

[.] - Optional line specification. Specifies where the command is to be executed. Defaults to the pending line.

INTERACTION WITH OTHER COMMANDS: None.

COMMENT: EDIT works with even number of characters (two characters in one word) on each line. A blank is padded for lines containing odd number of characters. A space may be needed to separate words at the joint.

EXAMPLES:

```
/ NAME (Lines created with no trailing blanks)
/ ADDRESS
/ PHONE
/ FUNCTION
/-3
NAME
/J
NAMEADDRESS
/J
NAMEADDRESS PHONE
/J
NAMEADDRESS PHONE FUNCTION
/
```

```
/ NAME (Lines created with trailing blanks)
/ ADDRESS
/ PHONE
/ FUNCTION
/-3
NAME
/J
NAME ADDRESS
/J
NAME ADDRESS PHONE
/J
NAME ADDRESS PHONE FUNCTION
/
```

K (Kill Lines)

Deletes the current line. Optional range (or maximum number of lines) can be defined to delete a block of lines. A file may be created or opened to save the lines deleted.

```
+-----+
|          [.][$]K [max] [+] [list file descriptor]          |
+-----+
```

[.] [\$] - Optional range. May be absolute line numbers separated by a space or comma. If both are omitted, default range parameters are from current pending line to last line. The default maximum range is one line. If only the last line is to be specified, a "," may be used to default the first parameter.

max - Optional. Defines the maximum number of lines to be deleted. Has precedence over the range given. If omitted, either the range of one line will be deleted. To default the maximum number to be the same as the range defined, enter two commas, i.e., "1 50 K,,LISTF".

[+] - Optional append parameter. Specifies that the list file named is to be appended and not written over.

list file descriptor - List file specified. It can also be the name of an existing file. The "max" parameter must be specified, or default to the range indicated by (,,), for this parameter to take effect. It also suppresses the "OK?" prompt if the file is created.

INTERACTION WITH OTHER COMMANDS: UN FCL

The UN command can be used immediately to negate the K command. The FCL command is used to close the list file.

COMMENTS: EDIT will prompt you with "OK?" and a y(es) answer is required for execution of this command if more than one line is deleted or if an existing file is to be opened. The prompt will not be issued when the list file is to be created.

EXAMPLES:

/K	(Delete current line; no prompt)
/. \$k 20 HILL::41	
created file HILL::41:4	(HILL created)
posted file HILL::41:4	
EOF	(File written to HILL; source file
/	in work area deleted; no prompt)
/l \$k	(Delete whole file)
OK? yes	
EOF	
/	
/. \$k/	(Delete remainder of file)
EOF	
/. \$k	
? ^	(File at EOF)
Start > EOF	
/	
/l 45 K	(Delete lines 1-45)
OK? sl;kj	
Command not executed	
/	
/K10	(Delete 10 lines; begin at PL)

BK (Kill Trailing Blanks)

Deletes trailing blanks on every line throughout the whole file. It also truncates all line longer than the maximum line length set by the line length option command.

```
+-----+
|               [.] [$] BK               |
+=====+
```

INTERACTION WITH OTHER COMMANDS: SE LE

COMMENTS: BK can be entered anywhere in the edit session. It will delete trailing blanks on every line. EDIT moves to EOF.

All lines are adjusted to even number of characters, padding with one trailing blank if necessary. BK will not create zero length lines but instead will leave two blanks.

If the line length was set, all lines longer than the length set will be truncated to the current line length.

EXAMPLE:

PROGRAM EXAMPLE	(Current pending line)
/N	
56	(Check line number)
/LI	
159	(Check file size)
/BK	
EOF	(EDIT moves to EOF)
/	

L (List)

Displays a number of lines. Default is 20 lines. Optional range may be defined. A file may be created or opened to store the lines listed. A maximum number of lines to list may be specified; this parameter has precedence over the range defined.

```
+-----+
|                [.][$] L [max] [+] [list file descriptor]                |
+-----+
```

[.] [\$] - Optional range. May be absolute line numbers separated by a space or line specification characters with or without offset. If both are omitted, default range is from current pending line to last line. (Note that the default maximum number of lines is 20.) If only the last line is to be specified, a "," may be used to default the first parameter.

max - Optional. Defines the maximum number of lines to be listed. Has precedence over the range given. If both are omitted, only 20 lines will be listed. To default the maximum number to the same as the range defined, enter two commas, i.e., "1,50,L,,LISTF".

[+] - Optional append parameter. Specifies that the list file named is to be appended and not written over.

list file descriptor - List file specified. It can also be the name of an existing file. The maximum number of lines must be specified, or default to the range indicated by (,,), for this parameter to take effect. Specifying an existing file will cause the OK? prompt to be issued. Answering y(es) will overwrite the file.

INTERACTION WITH OTHER COMMANDS: LN and LU, N, and FCL

To list lines with line numbers, use LN. Once LN is used, line numbers will be displayed for subsequent list commands. To turn off line numbers, use the LU command.

To display a specific line, use the n command.

To display the next line, use <cr>.

The FCL command can be used to close the list file created or opened.

COMMENTS: Don't forget that if lines are deleted or added, going back to any previous line changes the line numbering.

EXAMPLES:

```
EOF
/120L 40                (start number too big)
/120L40
?^
Start > EOF
/

/1+5L20                (list 20 lines from line 6)

/12,L,40               (list 40 lines from line 12)

/L                    (list 20 lines from PL)

/.$L 20 LIST::41
created file LIST::41:4 (LIST created)
posted file LIST::41:4 (File left opened)
    JSB                (Pending line)
/

/1,$,L,,LIST
created file LIST::41:4
posted file LIST::41:4
EOF
/

/45 $L,,+              (list and append lines to list file)
posted file LIST::41:4
EOF
/

/1$L 20                (list 20 lines from line 1)
```

LE (Length Check)

Displays the length of the pending line in number of characters.

$$\begin{array}{|c|} \hline \text{L E} \\ \hline \end{array}$$

INTERACTION WITH OTHER COMMANDS: None.

COMMENTS: All trailing blanks are included. The BK command can be used to delete them. On all systems except RTE-A, EDIT works with an even number of characters on each line. (On RTE-A, odd lines are not padded with blanks.) Thus some lines may have an extra blank. See example shown below.

EXAMPLES:

```

1234567
/LE
8
/1
1
/F/123456/
12345
/LE
6
/
(Counting leading blank)

123
/LE
6
/BK
EOF
/-1
123
/LE
4
/
(Line has two trailing blank)
(6 characters counted)
(Kill trailing blanks)
(Above line now has 4 characters)

```

LI (Lines in File)

Displays the number of lines in the file. This command can be entered anywhere in the editing session.

```
+-----+  
|                               LI                               |  
+-----+
```

INTERACTION WITH OTHER COMMANDS: None

COMMENTS: None

EXAMPLES:

```
/LI  
56
```

LN (List Lines with Numbers)

Displays a number of lines with line numbers. Turns on line numbering for all subsequent list commands. Line numbering must be turned off by the LU command. Operates in the same manner as the L command. All lines listed are numbered except the new pending line.

```
+-----+
|          [...] [$] LN [max][+] [list file descriptor]          |
+-----+
```

Command syntax is the same as the L command previously described.

INTERACTION WITH OTHER COMMANDS: L, LU and FCL

Once LN is used, line numbers will be displayed for subsequent list commands. To turn off line numbers, use the LU command.

The FCL command can be used to close the list file created or opened.

COMMENTS: Don't forget that if lines are deleted or added, going back to any previous line changes the line numbering.

Note also that the lines stored in the list file will have line numbers.

EXAMPLES:

```
Line one
/LN3
00052 Line one
00053 Line two
Line three
/L3
00054 Line three
00055 Line four
Line five
/LU2
Line five
Line six
/L1
Line six
/
```

LU (List Lines without Numbers)

Displays a number of lines without line numbers. Used to turn off the LN command. Operates identically as the L command.

```
+-----+
|          [.] [$] LU [max] [+] [list file descriptor]          |
+-----+
```

Command syntax is the same as that for L previously described.

INTERACTION WITH OTHER COMMANDS: L, LN and FCL

LN is used to turn on line numbering.

FCL is used to close list file created or opened.

COMMENTS: Don't forget that if lines are deleted or added, going back to any previous line changes the line numbering.

EXAMPLES:

```
      Line one
/LN3
00052 Line one
00053 Line two
      Line three
/L3
00054 Line three
00055 Line four
      Line five
/LU2
      Line five
      Line six
/L1
      Line six
/
```

M (Merge Files)

Merges a specified file after the pending line. After the file has been merged, the last line of the merged file becomes the new pending line.

```
+-----+
|          [...] M <file descriptor> [start line][number of lines] |
+-----+
```

[.] Specifies where the file is to be merged. Default is pending line.

file descriptor Refer to File Specification in Chapter 1 for details. Any portion of the default file descriptor can be used.

start line If only part of the file is needed, the start line number specifies the first line of text to be moved into the existing file. It can be larger than 32767.

number of Specifies the number of lines to be moved into the lines existing file.

INTERACTION WITH OTHER COMMANDS: UN

The UN command can be entered immediately after execution of M to delete the merged lines.

COMMENT: If the merge command fails for any reason, EDIT moves to the next line and returns to the interactive mode.

EXAMPLES:

```
/L2
  First line
  Second line
/-1
  First line                (Pending line)
/M TR
opened file TR::41:4
closed file TR::41:4
  Second line                (New pending line)
/M TTTT
No such file TTTT:::4
  (returns to line after PL)
/
```

MO (Move Lines)

Moves a number of lines to below the pending line. The lines moved are deleted from their previous locations. The lines are displayed and the last line becomes the pending line.

```
+-----+
|               L1 [*] MO [Q]               |
+-----+
```

L1 - Required line number of first line to be moved.

* - Optional line number of the last line to be moved. Defaults to the same number as the first line, moving only one line.

Q - Optional. Suppresses display of lines moved.

INTERACTION WITH OTHER COMMANDS: UN

The UN command can be used to negate the MO command.

COMMENTS: If this command is entered without defining any line number, EDIT will try to merge a file named 0.

The MO command works with the source work area. You cannot move lines overlapping the pending line. For example, moving line 10-50 while the pending line is 25 is not legal.

Lines moved are displayed unless suppressed. If Q is specified, only the new pending line will be displayed.

EXAMPLES:

```
/L3
  AAAAAAA 1111111      (File has four lines)
 BBBBBBB 2222222
  CCCCCCC 3333333
/1 2 MO Q              (Move 1 and 2 to after 3)
  DDDDDDD 4444444      (next PL, line 4 displayed)
/1 4 L
  CCCCCCC 3333333
  AAAAAAA 1111111
  BBBBBBB 2222222
  DDDDDDD 4444444
/
```

N (Display Line Number)

Displays the line number of the pending line.

	N	
--	---	--

INTERACTION WITH OTHER COMMANDS: None

COMMENTS: None

EXAMPLES:

/N
56

n (Line Number)

Displays line n and makes it the pending line. The number may be any absolute number or line specification characters.

```
+-----+
|               n               |
+-----+
```

INTERACTION WITH OTHER COMMANDS: Line specification characters:

```
+n    forward n lines from pending line
-n    backward n lines from pending line
^n    backward n lines from pending line
.    current line
$    last line
>    last line
*    Used only in second line number. Indicates the second
     number is the same as the first number specified.
,    Default first line specification will be used.
'PA' Search forward for pattern (PA).
`PA` Search backward for PA.
:x    go to line marked with x (a-z).
```

COMMENTS: The line number is always that of the file in the destination work area. If you have added or deleted lines, the subsequent line numbering will be different even though you are still in the same editing pass.

EXAMPLES:

```
/L5                                    (List 5 lines from line 1)
AAAAAAA 1111111
BBBBBBB 2222222
CCCCCCC 3333333
DDDDDDD 4444444
EEEEEEE 5555555

/1                                    (Go to line 1)
AAAAAAA 1111111

/5                                    (Go to line 5)
EEEEEEE 5555555

/-3                                   (Go back 3 lines from PL)
BBBBBBB 2222222

/$                                    (Go to last line of file)
EEEEEEE 5555555

/^4                                   (Go back 4 lines from PL)
AAAAAAA 1111111

/2 4                                  (Go to line 2; then list up
BBBBBBB 2222222                      line 4)
CCCCCCC 3333333
DDDDDDD 4444444
```

O (Duplicate Pending Line and Edit)

Duplicates the pending line and allows character edits on the duplicated line. The new line becomes the pending line. Any line can be duplicated and modified by specifying the line number.

[.] 0 <text>

text - Replacement text. A slash can be used to preserve a character. All character editing control characters can be used. If text is omitted, the duplicated line is unchanged.

INTERACTION WITH OTHER COMMANDS: UN

The UN command can be used immediately to negate the 0 command.

Following line edit control characters can be used:

cntl B - Break line at this position

cnt1 C - Delete characters

cnt1 R - Replace characters

cnt1 S - Insert character

cntl T - Truncate line

cnt1 X - Extend line

The slash (or the current prompt) leaves character in that position unchanged.

COMMENT: You can go to any line and execute the 0 command on that line.

EXAMPLES :

```

/          1
/0/////////2
          1 2
/o//////////3
        1' 2 3
/-3 LN 3
      00055          1
      00056          1 2
      00057          1 2 3
/56 0xxxxxxxxx
      xxxxxxxx2
/55 58 L 4
      00055          1
      00056          1 2
      00057 xxxxxxxx2
      00058          1 2 3

```

P (Pending Line Edit)

Allows character edits on the pending line and displays the edited line as the new pending line.

[.] P <text>

[.] - Line specification. specifies the line to be edited.
Default is pending line.

`text` - Replacement text. A slash can be used to preserve a character. All character editing control characters can be used. If `text` is omitted, the duplicated line is unchanged.

INTERACTION WITH OTHER COMMANDS: UN

The UN command can be used immediately to negate the P command.

Following line edit control characters can be used:

```
cnt1 B - Break line at this position
cnt1 C - Delete characters
cnt1 R - Replace characters
cnt1 S - Insert character
cnt1 T - Truncate line
cnt1 X - Extend line
```

The slash (or the current prompt) leaves character in that position unchanged.

COMMENT: None

EXAMPLES :

```

1
/P//2
1 2

/LN 2
00063 AA BBBBBB
00064 BB CCCCCC
/63 P///CCCCC
AA CCCCCC
/63 LU 2
AA CCCCCC
BB CCCCCC
/

```

Q (Local EDIT)

Allows the use of terminal editing keys for pending line character edits. The edited line becomes the pending line.

```
+-----+
|               Q               |
+-----+
```

INTERACTION WITH OTHER COMMANDS: None

COMMENT: This command displays the pending line with the cursor positioned on the same line as the line of text. The cursor positioning keys can be used to go to the appropriate column and perform local editing. It may be considered as the "single-line screen mode" command.

Refer to Appendix B for the use of the Q command in multipoint environment.

EXAMPLES:

```
    The quick brown fox jumped over the lazy dog's back 1234567890
/Q
    The quick brown fox jumped over the lazy dog's back 1234567890
^
```

(cursor positioned at column 1; local edit can begin)

R (Replace Pending Line with Text)

Replaces the pending with text entered behind the R command.

```
+-----+
|                [...] R <text>                |
+-----+
```

[.] - Optional line specification. Default is current pending line. Any of the line specification characters can be used.

text - New line of text to replace pending line. If no text is entered, the pending line becomes a null (zero length) line.

INTERACTION WITH OTHER COMMANDS: UN

The UN command can be used immediately to negate the R command.

COMMENTS: The escape and tab characters can also be used in line editing. Lines being added beginning with the letter U must be preceded with the escape character (\) to prevent confusion with the RU command.

EXAMPLES:

```
/RLinear acceleration      (Replace PL with text)
/

/10 RChapter 3             (Replace line 10 with text)
/

    Old line to be replaced
/rNew line
/.
    New line
/R///
/.
    ///

/Rundefine externals      (Op Sys tries to clone program UNDEFI)
  fmgr cloning error 67
Resume EDI91 on R::JL:4
/R\underfine externals
/
```

RU (Run Program)

Clones and runs a program. Then returns to current pending line.

```
+-----+
|               RU <program>[run string]               |
+-----+
```

program run string - Program name followed by the proper run string if necessary.

INTERACTION WITH OTHER COMMANDS: None

COMMENT: The file being edited may be restored to the disc file with the WR command and closed with the FCS command. It then can be used with another program including another copy of EDIT. The file name must be specified for future WR or ER commands after FCS closed the file.

The run string is case folded and blanks are replaced with commas. Under all operating systems except RTE-A, to suppress case folding and comma substitution, enclose the string with backquotes (` `).

EXAMPLES:

/RU,EDIT (Start another EDIT session)

ED91A : Use ? for help
FI,namr specifies file to edit.

EOF

/A/

ED91A aborted by user

end of edit

Resume EDI91 on ED2::41:4

/RU,FMGR

:CL

LU	LAST TRACK	CR	LOCK	P/G/S
----	------------	----	------	-------

33	00227	00041		P
----	-------	-------	--	---

36	00227	00036		G
----	-------	-------	--	---

37	00227	V1		G
----	-------	----	--	---

19	00115	00019		G
----	-------	-------	--	---

20	00086	00020		G
----	-------	-------	--	---

22	00254	SM		S
----	-------	----	--	---

02	00255	00002		S
----	-------	-------	--	---

03	00254	00003		S
----	-------	-------	--	---

:EX

\$END FMGR

Resume EDI91 on ED2::41:4

/RU,EDIT,HELLO,1\$U//` `//

(Start another EDIT session
and make a substitution within
the specified file.)

S (Screen Edit)

Provides a 20-line screen bracketed by a begin- and an end-flag line. The terminal editing keys can be used to perform local edits. A command set consisting of control characters is used for exiting the screen mode. The starting line of the screen and the size of the screen can be entered in the command string. Default is starting at a line 10 lines before the pending line with a 20-line screen. When moving from one screen to another, a default overlap of two lines is used. The default screen size and overlap can be redefined by the SD option. A screen memory overflow protection is provided for terminals with the memory-lock feature. You cannot insert any more lines and the memory lock light will be flashing if the terminal memory is full.

```
+-----+
|               [.-10] [*+20] S               |
+-----+
```

[.-10] - Optional first line of screen. Default is 10 above PL.

[*+20] - Optional range. Defines the last line of screen. The default is 20 lines from the first line defined.

INTERACTION WITH OTHER COMMANDS:

Screen mode commands are entered as follows: <cntl><command> <cr>. Commands are Q, P, F, S, C, and O. Each screen command will replace the screen before the command function is executed. If a screen mode command is repeated, i.e., cntl<cmd><cmd>, the screen will not be replaced, leaving the screen unchanged.

cntl Q - Quit screen mode. The line after the last line in the screen will become the pending line. If cntl Q cntl Q (or hold down the CNTL key and press Q twice, cntl QQ) is entered, the first line of the screen will be the pending line.

cntl P - Previous screen. Go to the previous screen. Use either the default or defined overlap.

cntl F - Forward one screen. Use either the default or defined overlap.

cntl S - Start next screen at line indicated by cursor position.

cntl X - Same as S except a large screen is provided. The size is determined by the amount of terminal memory available. It will be slightly smaller than the maximum terminal memory. This can be checked by the SH SL command. You may change the maximum screen size but it may nullify the screen overflow protection if it is increased.

cntl C - Command execution. Execute one line of editor commands and return to screen mode. The cursor position in the screen determines the PL and the EDIT prompt (/) will be displayed below that line. Line insertion, addition, deletion can be done and read into the screen. The vertical bar can be used to separate commands for multiple commands on the same line.
 cntl O - Copy a line indicated by the cursor on the screen.
 cntl K - Positions the cursor for a line marker.
 cntl A - Move cursor to first character on line. Reset margins.
 cntl Z - Move cursor to last character on line. Reset margins.

Entering cntl K causes a colon to be placed at column 79 with the cursor at column 80. A letter (case folded) can be entered to mark the line. Each letter can be used only once, the latest entered will take effect.

The default screen mode options can be checked by:

```
/SH SD
Screen defaults.....SD = 10 10 2
```

The defaults are a 21-line screen starting at 10 lines before the current pending line with a 2-line overlap. To change the defaults:

```
/SE SD <x> <y> <z>      where: <x> is number of lines above PL
                             <y> is number of lines below PL
                             <z> is number of overlap lines
```

The screen size is the total of the first two numbers specified plus one.

COMMENT:

While in screen mode, EDIT locks the screen and disables interrupt processing from the terminal.

You can specify a specific line to be the start of the screen with

```
/n S
```

n being any line number or any of the line specification characters with or without offset.

If you delete the flag lines, EDIT will prompt you for one of the following actions:

```

Enter O to ignore screen display, original text unchanged.
Enter S to read screen and modify source file.
Enter B to read screen and insert it in the source file without
        altering the original text.
```

EDIT messages: (for missing stop line)

Stop line not found
What should be saved ??

```
O saves original text written to screen
S saves text just read from screen
B saves both (inserts screen text before original text)
What should be saved ?
```

EXAMPLE:

```
/22 S (Go to line 22 and start screen mode)
```

```
>>*** line      22 ***** cntl Q reads *** cntl Q cntl Q aborts ***<<
                        *****
```

```
>>--- line      EOF ----- LEMON::41:4 -----<<
```

NOTE: For RTE-A, if the file descriptor is too long to fit on the ending line of the screen, the first characters of the namr are displayed followed by three dots ("...") to indicate the entire descriptor is not being displayed.

SC (Screen Copy)

Copies everything in the screen memory to after the pending line. Stops when 24 null (zero length) lines are encountered. These null lines are not copied.

```
+-----+
|                                     SC                                     |
+-----+
```

INTERACTION WITH OTHER COMMANDS: UN

The UN command can be used immediately to negate the SC command.

COMMENT:

Note that everything is copied, including the SC command.

EXAMPLE:

```
//
---Commands---
S
wr
sh
sc
^20s
l
156
^30s
$
SC

^25s
.$k/
s

EOF
/SC
```

SE (Set Option)

Sets various EDIT options and defaults. The initial conditions are set up when EDIT is run. The defaults can be checked with the SH command. The default for any option is to revert to the initial condition, e.g., /SE AC will change the anchor character back to "^".

```
+-----+
|               SE<option>               |
+-----+
```

option (default)	description
AC (^)	- Anchor character used in pattern specification. Anchors the pattern to the start of search window. May be changed to any character.
EC (\)	- Escape character used to revert a character with special meaning to its original meaning, e.g., \\ tells EDIT the second \ should be a backslash.
IC (@)	- Indefinite character.
PC (/)	- Prompt character. Cannot be any alpha character.
CS ()	- Command separator. Used to separate commands in a command or run string. Number of commands is limited by the number of characters in a line. However, only 79 characters will be saved in the command stack.
TC (TAB, cntl I)	- Tab character. Used in line editing to position text at various tab stops.
WC (1,150)	- Window columns for horizontal search window.
SD (10,10,2)	- Screen default. The three parameters must be separated by blanks or commas. Size is specified in lines above and below the pending line (first two parameters). The last parameter is the number of overlap lines between screens.
SL	- Maximum screen size. Default is determined by the terminal display memory. Typically, it is about 32 lines for a 262X terminal and 100 lines for a 264X terminal with 12K of memory. It is recommended that the default not be changed because this number is used for display overflow protection.

VW (10,10)	- Vertical window. Number of lines to display with the window (W) command. First entry is number of lines above the pending line, second entry the number of lines below the pending line.
LE (150)	- Maximum characters allowed on a line.
AS (on)	- Asking for verification of dangerous commands (A, FI, D, K, MO, U, X, and Y). A toggle command.
CF (on)	- Case folding initially on to ignore upper and lower case distinction. Must be turned off to allow matching of unique upper/lower case letters. This option does not affect the EDIT command syntax. EDIT still accepts commands in lower case with CF off.
RE (off)	- Regular expression; initially off. Must be turned on to allow the use of metacharacters for special pattern searches and matches.
DF (on)	- Display function; initially on to enable screen mode display functions such as inverse blinking video and display of terminal control (escape) characters.
RT (on)	- Return; initially on to return multiple search/matches (or no match) to pending line. Set to of to stop at EOF.
TS (on)	- Time stamp; initially on to update time stamp if found. Time stamp must be in the form of <YYMMDD.HHMM> with the > character next to the last non-blank character in the line.
BE (off)	- Bell; turned on to enable bell with prompt.

INTERACTION WITH OTHER COMMANDS:

Options and defaults affecting other commands are described under the respective commands. The SH (or SH ALL) command shows all the options and defaults. SH <option> will display the option in effect.

COMMENT: If no parameter is entered and a numeric value is expected, the default will be used. If a toggle command (on/off) is entered without any parameter, the current value is used. Numeric values cannot be set to zero; if done, the default is used.

SH (Show Options)

Displays the various options and defaults or a single one selected. It also displays the default pattern, match, substitute, source file and list file.

```
+-----+
|               SH<option>               |
+-----+
```

option	Current Setting
AC	- Shows anchor character, initial default is ^ .
EC	- Shows escape character, initial default is \ .
IC	- Shows the indefinite character, initial default is @ .
PC	- Shows prompt character, initial default is / .
CS	- Shows command separate character, initial default is .
TC	- Shows tab character, initial default is TAB key or cntl I.
TS	- Shows time-stamp update on or off;initially on.
WC	- Shows search window columns. Default is 1, 150.
SD	- Shows screen size given in two parameters, number of lines above and below the pending line. The overlap parameter is given as the third parameter. Default is 10, 10, and 2.
SL	- Maximum screen size. Default is determined by the terminal display memory. Typically, it is about 32 lines for a 262X terminal and about 100 lines for a 264X terminal with 12K of memory. It is recommended that the default not be changed because this number is used for display overflow protection.
VW	- Shows the number of lines to be displayed above and below the pending line. Defalt is 10, 10.
LE	- Shows maximum characters allowed on a line. Default is 150.

- AS - Shows on/off status of screen mode display function. Initially on to allow display or creation of terminal control characters, inverse video, etc.
- CF - Shows on/off status of case folding. Initially on.
- RE - Shows on/off status of regular expression enable option. Initially off.
- DF - Shows on/off status of screen mode display functions (terminal control characters, inverse video, printer control, etc.) Initially on.
- RT - Shows on/off status of return-to-pending-line option. Initially on to return to pending line.
- UN - Shows the EDIT commands and the lines modified with the old text. This is the list maintained by EDIT and used if the UN command is entered. This list is updated for each text modification.
- F,B,D, or K - Shows the pattern last specified.
- G,U,X, or Y - Shows the last match pattern and substitute pattern specified.
- ER or WR - Shows the source file specified initially or with the FI command.
- L - Shows the list file specified.
- File modified flag FM - Shows whether any changes have been made. Initially off; turned on by a scratch file modification, and turned off by WR, WC, or FI.
- AB - Shows the EDIT abort messages.
- DA - Shows the date code of EDIT.
- RM - Displays brief explanation of recovery mode.

INTERACTION WITH OTHER COMMANDS: None.

COMMENT: None.

SZ (File Size Check)

Shows the approximate number of words above pending line in the work area.

```
+-----+
|                               SZ                               |
+-----+
```

INTERACTION WITH OTHER COMMANDS: None

COMMENT: None

EXAMPLE:

```
/SZ
  956
```

T (Tabs)

Sets tab columns. Up to 10 settings are allowed. Special tab setting commands are predefined for various program preparation.

```
+-----+
|               T[n1,n2,...,n10]               |
+-----+
```

n1 through n10 - Tab columns.

INTERACTION WITH OTHER COMMANDS:

Other special tab setting commands:

TA - Use preset ASMB tabs (columns 7 and 21)

TF - Use preset FTN tabs (columns 7, then every 4 columns)

TM - Use preset Macro tabs (columns 10, 26, 40, 44, and 48)

TP - Use preset Pascal tabs (every 3 columns)

TL - Set terminal tab stops so that they line up with line
mode tabs.

TS - Set terminal tab stops so that they line up with screen
mode tabs.

The tab character is the TAB key on the terminal (or cntl I). It may be changed to another character with the tab character option TC:

```
/SE TC<char>
```

The current tab character can be checked with :

```
/SH TC
```

COMMENT: A tab stop cannot be set in column one.

EXAMPLE:

```

/T 1 5 7
? ^
/T 2,5,8,11,14
/SH T
Tab character..... TC =tab (cnt1 I)
Tab columns.....=      2      5      8      11      14
/ts
T T T T TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
/TL
T T T T TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
/TM
/SH T
Tab character..... TC =tab (cnt1 I)
Tab columns.....=      10     26     40     44     48
/
/TL
          T          T          T T T T TTTTTTTTTTTTTTTTTT
/TS
          T          T          T T T T TTTTTTTTTTTTTTTTTT
/SH T
Tab character..... TC =tab (cnt1 I)
Tab columns.....=      10     26     40     44     48     52
/TA
/SH T
Tab character..... TC =tab (cnt1 I)
Tab columns.....=      7      21
/

```

TI (Time)

Adds the time and date to the current pending line. Location may be specified anywhere on the line.

```
+-----+
|               [.] TI n               |
+-----+
```

[.] Optional line specification. Specifies the line where the information is to be added. Default is pending line.

n - Starting column of the time and date information. Default is column 1.

INTERACTION WITH OTHER COMMANDS: UN

The UN command can be used immediately to negate the TI command.

COMMENTS: The information added is 30 characters long.

EXAMPLES:

/p

/ti 1

5:04 PM TUE., 12 AUG., 1980

/TI 34

5:04 PM TUE., 12 AUG., 1980

TR (Transfer)

Transfers to a command file or an input device. Useful in running EDIT in batch mode where a command file is set up. Refer to the section on batch mode operations in Chapter 2 for more detail. When used in a command string, TR must be the last command.

```
+-----+
|                                     |
|                                     TR <file descriptor> [Q]                 |
|                                     |
+-----+
```

(Refer to "File Specification" in Chapter 1 for details.)

[Q] Optional listing suppression.

Delimiters are required between TR
and <file descriptor> and between <file descriptor>
and Q option if used.

INTERACTION WITH OTHER COMMANDS: None.

COMMENT: It is a good idea to specify a cartridge reference number. This makes sure that the file is read from the correct disc cartridge. If omitted, the file is read from the cartridge containing another file with the same name on the top of the cartridge list which may not be desirable.

The TR command may also be used with a logical unit (LU) number to receive command file or inputs from an input device.

The OK? prompt will be issued requiring a response from the terminal unless suppressed with a slash (or current prompt).

EXAMPLE:

```
/TR,CMDFIL                                (From EDI91 on file EDIT2)
opened file CMDFIL::JL:4
OK? NO
Command not executed.
closed file CMDFIL::JL:4
/TR,CMDFIL,Q/                             (Suppress display and TR prompt)
opened file CMDFIL::JL:4
closed file EDIT2::JL:4 (ER in command file)
end of edit
:
```

A sample command file (CMDFIL):

```
1$ U//      //  
1$ X/!\\\\\/  
1$ X/32767/32768//  
TI 30  
KB  
ER
```

U (Unconditional Exchange)

Replaces a number of characters with a substitute string. A range of lines may be specified with this command. Default is the current pending line. Listing of matches is optional.

```
+-----+
|          [.][*] U /match field/substitute/[Q]          |
+-----+
```

[.][*] - Optional range. May be line numbers or any of the line specification characters. Default for first entry is the pending line and for the second entry is the same as specified for the first entry.

/ / - Delimiters for match field/substitute. May be the slash or any other punctuation mark (except commas and spaces). The last delimiter may be omitted if the Q option is not used.

match field - Unconditional deletion field. Place holder are used to indicate the number of characters to delete. The match field may be a zero length field. Deletion starts at the window. Characters may be extended past window.

substitute - The new string to replace the field deleted. Number of characters need not be the same as the match field. May be a zero length field.

[Q] - Optional display suppression.

INTERACTION WITH OTHER COMMANDS

The U command shares the match field and substitute string default with the G, X, and Y commands. The default can be checked with SH followed by any of the exchange commands, e.g., /SH U.

COMMENT:

The default match and substitute patterns are used if only U is entered. To use the default with the Q option, enter "U,,Q".

The line below the last line in the range specified becomes the new pending line.

EXAMPLES:

/1\$ U/xxxxxxxx//Q/

(Delete first 8 characters on all lines;
suppress listing and prompt)

/1\$ U/AA/11111//

(Replace first two characters with 11111;
suppress prompt)

UN (Undo)

Reverts the command executed immediately before this command to the prior state, replacing the substitute with the match field. Must be entered before the next file modification to be effective.

```
+-----+
|                                     UN                                     |
+-----+
```

INTERACTION WITH OTHER COMMANDS: UY

The UN command can be used after the C, CO, D, G, I, J, K, M, MO, O, P, Q, R, SC, TI, U, X, or Y command.

The old lines can be checked with the SH UN command. A list of the last change is maintained by EDIT. The UY command can be used to retrieve any old line.

If the UY command is used, the UN list is unchanged but the line numbering of the file may be changed to render this list unuseable.

COMMENT: This command cannot be used for the screen mode changes.

EXAMPLES:

```
PL The answer is
/X/The/An//
PL An answer is
/UN
PL The answer is

xxxxx<810101.1349>
/X/xxxxx///
<810101.1349>
/??
EDI91 on EDIT2::YL:4
/UN
xxxxx<810101.1349>
```

W (List Window)

Lists a vertical window, i.e., a number of lines specified in the command string. Returns to the pending line. Default is 10 lines above and below the pending line. The default can be changed by resetting the VW option.

```
+-----+
|                                     |
|                               [.-10][*+20] W                               |
+-----+
```

[.-10] [*+20] - Vertical window range. Can be absolute line numbers separated by a space or any of the line specification characters with or without offset.

INTERACTION WITH OTHER COMMANDS

The VW option determines the default range for W. WU turns line numbering off; WN turns it back on.

COMMENT: EDIT always returns to the pending line after listing. If a listing does not include the pending line, the > mark will not be displayed. W will not indicate EOF if encountered. This command is useful for finding out where you are in the file. It will normally display line numbers unless turned off by WU. Once turned off, no numbers will be displayed unless turned on with WN.

EXAMPLES:

```
/W

/100W      Display 20 lines below line 100
           Return to PL

/WU        List vertical window without numbering.
```

WC (Create File without Exit)

Creates a file without exiting EDIT. Operates in the same manner as the EC command except that the editing session is not ended.

```
+-----+
|                               WC [file descriptor]                               |
+-----+
```

(Refer to "File Specification" in Chapter 1 for details.)

INTERACTION WITH OTHER COMMANDS: None.

COMMENT: WC returns to pending line.

EXAMPLES:

```
/WC"EDIT::SM
```

```
/WC LEMON:YL:41
```

```
/wc edit1::sm
```

```
/wc*copy:-1:41
```

```
/WC TEST_PROGRAM.SRC          (RTE-A only)
```

WR (Replace File without Exit)

Replaces a file without leaving EDIT. It operates in the same manner as the ER command. Returns to the current pending line. Note that there will not be any prompt before the file specified is written over. The default file namr is the EDIT input source file.

```
+-----+
|                                     |
|                                     WR [file descriptor]                     |
|                                     |
+-----+
```

(Refer to "File Specification" in Chapter 1 for details.)

INTERACTION WITH OTHER COMMANDS:

The FCS command removes the default namr so that file name must be specified in WR.

COMMENT: File specified must exist. If namr is omitted, the default source file is used. File type and size are ignored.

WR returns to pending line.

Note that WR does not issue a prompt and will write into the file specified. Be careful about restoring to an unprotected file other than the one you are editing.

EXAMPLES:

```
/FI,E1/
opened file E1::41:4
FIRST LINE
/WR
posted file E1::41:4
FIRST LINE
/WR E2
opened file E2::41:4
closed file E2::41:4
FIRST LINE
/WC E4:YL:41
created file E4:YL:41:4:2
closed file E4:YL:41:4:2
FIRST LINE
/WR E4
Illegal access E4::41:4          (File write protected)
FIRST LINE                      (File E4 unchanged)
/

/WR /DIR/SUBDIR/FILE.TXT        (RTE-A only)
opened file /DIR/SUBDIR/FILE.TXT
closed file /DIR/SUBDIR/FILE.TXT
```

X (Exchange)

Exchanges all occurrences of pattern specified with a substitute string in the range specified. Range default is current pending line only.

```
+-----+
|          [.][*] X /pattern/substitute/[N][Q][R][S]          |
+-----+
```

[.][*] - Optional range. May be line numbers or any of the line specification characters. Default for first entry is the pending line and for the second entry is the same as specified for the first entry (PL only). Space or comma must be used to separate numbers.

/ / / - Delimiters for pattern/substitute. May be the current prompt or any other punctuation mark (except commas and spaces). The last delimiter may be omitted if no options are used. All three are required if any option or OK? prompt suppression is used. The default pattern and substitute can be used by omitting the delimiters and patterns. If omitted, the last pattern specified for G, U, X, or Y will be used. The default pattern can be checked with SH <G, U, X, or Y>; the substitute string will also be shown. To default the pattern but specifying an option, enter X,,option. If a null pattern is entered, the F command pattern is used.

pattern - Pattern to be searched. Follows the rules for pattern specification. If RE is turned on, the metacharacters can be used for unique pattern matches. If omitted, the pattern previously defined with G, U, X, or Y is used. Default can be checked with:

/SH <G, U, X, or Y>

substitute - The new string to replace the pattern. If omitted, the last one defined for G, U, X, or Y is used.

[N] - Optional. No-window parameter. Allows match anywhere on a line. Default is search only within the horizontal window.

[Q] - Optional display suppression.

[R] - Optional. Removes all zero length lines.

[S] - Optional. Single exchange parameter. Permits at most one exchange on a line.

INTERACTION WITH OTHER COMMANDS

The X command shares the match field and substitute string default with the G, U, and Y commands. The default can be checked with SH followed by any of the exchange commands, e.g., /SH X.

With regular expression on, the metacharacters may be used in the match and substitute patterns.

The UN command can be used immediately to negate the X command.

COMMENT: EDIT will not prompt for single line (PL) exchanges. If a range is specified, when the lower limit is reached, the number of exchanges is reported along with CF or RE if they are on.

EXAMPLES:

```
/1$ X/ADDITION/ADD//      (Replace ADDITION with ADD)
```

```
/1$ L
123456789012345678901234567890
22222222223333333333334444444444
33333333334444444444445555555555
44444444445555555555556666666666
```

```
/SE WC 11 150
```

```
/SEREON
```

```
/1$X/^.<9>///           (Delete columns 11 thru 19)
```

```
Window 11, 150
```

```
00001 123456789001234567890
00002 2222222222234444444444
00003 3333333333345555555555
00004 4444444444456666666666
```

```
Limit      4 matches  CF  RE
```

```
4444444444566666666666
```

```
/
```

Y (Exchange and Search)

Exchanges pattern specified with a substitute string then finds the next occurrence of pattern. The line found containing the pattern specified becomes the pending line.

```
+-----+
|          [...] Y /pattern/substitute/[Q][R][N][S]          |
+-----+
```

- [.] - Optional. May be absolute line number or any of the line specification characters. Default is the pending line.
- / / / - Delimiters for pattern/substitute. May be the current prompt or any other punctuation mark (except commas and spaces). The last delimiter may be omitted if no options are used. All three are required if any option or OK? prompt suppression is used. The default pattern and substitute can be used by omitting the delimiters and patterns. If omitted, the last pattern specified for G, U, X, or Y will be used. The default pattern can be checked with SH <G, U, X, or Y>; the substitute string will also be shown. To default the pattern but specifying an option, enter Y,,option. If a null pattern is entered, the F command pattern is used.
- pattern - Pattern to be searched. Follows the rules for pattern specification. If RE is turned on, the metacharacters can be used for unique pattern matches. If omitted, the pattern previously defined with G, U, X, or Y is used. Default can be checked with:
- /SH <G, U, X, or Y>
- substitute - The new string to replace the pattern. If omitted, the last one defined for G, U, X, or Y is used.
- [N] - Optional. No-window parameter. Allows match anywhere on a line. Default is search only within the horizontal window.
- [Q] - Optional display suppression.
- [R] - Optional. Removes all zero length lines.
- [S] - Optional. Single exchange parameter. Permits at most one exchange on a line.

INTERACTION WITH OTHER COMMANDS:

The UN command can be used immediately to negate the Y command.

The Y command shares the match field and substitute string default with the G, X, and U commands. The default can be checked with SH followed by any of the exchange commands, e.g., /SH Y.

COMMENT: This command is identical to X except that it operates on only one line and then finds the next match.

(Sequence Numbers)

Places sequence numbers in columns 76 through 80 on all lines in the file. A three column identifier must be specified in columns 73 through 75.

```
+-----+
|                                     |
|                                     |
+-----+
```

CCC - Three-character identifier. Defaults to three blanks.
Can be any three printing characters. Must follow #
command immediately.

n1 - Optional starting number. Defaults to 00000.

n2 - Optional incremental value. Defaults to 10.

INTERACTION WITH OTHER COMMANDS: None

COMMENTS:

When listing a file on the terminal or the line printer, sequence numbers may be lost due to line truncation. A window of blanks may be deleted to show the sequence numbers. This command is useful in adding line numbers to programs.

EXAMPLES:

```
/# JOY 1 1
/# JOY 1 1      (Space taken as ID field which has four letters)
? ^
/#JOY1 1
OK? YES
EOF
/1$L
XXXXX                                JOY00001
XXXXX                                JOY00002
XXXXX                                JOY00003
XXXXX                                JOY00004
/
```

? (Help)

Provides a brief explanation of EDIT commands and selected items. This command is identical to command H. Default (?) provides a summary of the commands and special characters for line and normal pattern specifications.

```
+-----+
|               ? [command]               |
+-----+
```

This command is identical to the H command. Refer to description given previously for the H command.

/ (Command Stack)

Displays commands entered, allows any one to be selected and modified with the cursor, and executes it.

```
+-----+
|                                     |
|                                     / [n]                                |
+-----+
```

n - Optional. Number of commands to display. Default is 20.

The commands are listed in sequence with the cursor positioned at the last blank line. The cursor can be moved using the terminal cursor position keys to any command. Then the command parameters may be modified. Pressing <cr> will execute it. Entering <cr> immediately after display of the command stack will terminate this command and return to the EDIT prompt.

INTERACTION WITH OTHER COMMANDS:

If entered from screen mode (with cntl C), the slash only moves EDIT to the next line. The control character commands entered while in screen mode are not saved in the command stack.

COMMENTS: If commands are entered in one run string using command separators, only commands within a 79-character window will be saved in the command stack. The last 20 commands entered, including illegal ones, are saved.

If a command matches one already in the stack, the old one is removed from the stack. The command stack only works with systems using driver DVR05. If not, then the / command moves EDIT to the next line.

EXAMPLE:

```
//
---Commands---
S
sc
??
l
wcT::4l
wrT::4l
ls
<cursor position here>

EOF
/
```

<space> (Append a Line)

Adds a line of text after the pending line and makes the new line the pending line.

	<space>text	
--	-------------	--

INTERACTION WITH OTHER COMMANDS: None

COMMENT: NONE

EXAMPLE:

```

/L 3
    Line one
    Line two
    line three
/ New line added
/-3L 4
    Line one
    Line two
    Line three
    New line added
/

```

— (Repeat)

Repeats a command string or a line of text. The repeat command (|_) must be at the end of the command string or line of text separated by a command separator (|).

```
+-----+
|                                     |
|                                     |
+-----+
```

| - Command separator

<n> - Number of repetitions required

INTERACTION WITH OTHER COMMANDS: None (apart from repeating all commands specified in the command string).

COMMENT: EDIT displays the command string or text each time and the number of repetitions remaining. Note that EDIT counts backward to zero, so the number of repetitions is one greater than the number specified.

EXAMPLES:

1. Find line with BEGIN and mark it with "a", find line with END and mark it with "b", append a block of lines into file PROC, and repeat throughout the file (by choosing a repeat count larger than the number of pairs that could possibly be found) until all BEGIN-END pairs are found and appended to PROC.

```
/F/BEGIN/|Ka|F/END/|Kb/|:a :b L,,+ PROC/|_999
```

Note that if any command is not completed successfully, EDIT returns to the interactive mode.

2. Repeat a line for use in a table.

```
/se cs !
Command separator.... CS =!
/ | | | | |
/_10
/ | | | | |
:
/_00001
/ | | | | |
/_00000
/
```

*** (Comment)**

Provides a comment line in a command file. Useful in the batch mode operation. All characters after this command will be ignore by EDIT.

```
+-----+  
|                      *                      |  
+-----+
```

INTERACTION WITH OTHER COMMANDS: None.

COMMENT: None

AS (Abort Saving Scratch File)

Aborts the edit session without purging the scratch file.

```
+-----+  
|                      AS                      |  
+-----+
```

INTERACTION WITH OTHER COMMANDS: None

COMMENT: The scratch file is updated so that the recovery mode may be
 used to access the data in the saved scratch file

EXAMPLES:

Kx (Mark Line)

Marks a line with a letter (a through z). EDIT uses case folding for this command, either upper or lower case can be entered. Each letter can be used only once. The last line marked will retain the line marker. Previous line marked will be cleared of the line marker.

$$\left[\begin{array}{c} \cdot \\ \cdot \\ \cdot \end{array} \right] \mathbf{Kx}$$

INTERACTION WITH OTHER COMMANDS: None

COMMENT: The line marker set by the Kx command can be used as line specification.

EXAMPLES:

```

/15 Ka      (Go to line 15 and mark line with a.)
/
/F/BEGIN/|Kb  (Find line with BEGIN and mark with b.)
/
/:a :b K/    (Delete block of line specified by the markers.)

```

UY (Undo List Yank)

Recovers the lines contained in the undo list and places them after the pending line. All or any number of lines in the undo list can be recovered. EDIT moves to the next pending line after the UY command. This command changes the line numbering of the file and thus may invalidate the UN command.

```
+-----+
|               [.] UY [n1] [n2]               |
+-----+
```

[.] - Specifies where the recovered lines are to be placed. Default is the pending line.

[n1] - The first line on the list to be recovered. Must be the order in the list: 1, 2 or 3 for the first, second, or third line from the top of the list. Default is the first line.

[n2] - The number of lines to recover. Default is to recover all lines from the start line specified.

INTERACTION WITH OTHER COMMANDS: UN

The UY command can be used after the C, CO, D, G, I, J, K, M, MO, O, P, Q, R, SC, TI, U, X, or Y command.

The lines that can be recovered can be checked with the SH UN command.

COMMENT: None

EXAMPLES:

```
/SH UN          (Show undo list)
  2 Rskip 5      (2 is line , R is cmd to undo last change.)
  4 Rskip 10
  6 Rskip 15
/$              (Go to the last line.)
  space 5
/UY 3 1          (Replace the third line in the undo list to
EOF              after pending line.)
/UY              (Replace all line in the list to after the
/                pending line.)
  skip 15
EOF
/
```


Appendix A

Loading Edit/1000

The EDIT program must be loaded on-line. EDIT should be loaded by the system manager or a person appointed by the manager. The following components are required:

Module Name	Part Number	Description
%EDITA	92074-12001	EDIT program module
%EDITB	92074-12002	EDIT program module
#ED1K<X>		System load file
#ED1K4	92074-17001	RTE-IVB load file
#ED1KL	92074-17002	RTE-XL load file
#ED1K6	92074-17003	RTE-6/VM load file
#ED1KA	92074-17005	RTE-A load file
\$ED1K<X>		System Library
\$ED1K4	92074-12003	RTE-IVB library
\$ED1KL	92074-12004	RTE-XL library
\$ED1K6	92074-12005	RTE-6/VM library
\$ED1KA	92074-12011	RTE-A library
"EDIT.	92074-17004	EDIT help file

Memory Requirements

EDIT requires a partition of 20 pages or larger. A 22-page partition usually gives adequate performance, but larger partitions improve the performance. If the manager loads it into a partition smaller than 20 pages, EDIT issues a message that requests a larger partition and terminates.

RTE-IVB and RTE-6/VM Loading Considerations

The system manager should load EDIT as a permanent program for security, convenience, and better performance. The manager can load it as a permanent program by specifying the IH option in the LOADR run string, and the OP,PE command. EDIT must be loaded on-line; not at generation time. A LOADR command file (called #EDIK6) and a run string that uses the command file for loading EDIT as a permanent program are shown below:

```
*LOADR command file #EDIK6
OP,PE
OP,LB
SZ,24
LIB,$ED1K4 (Loading EDIT into RTE-IVB)
RE,%$SCRN (Using $SCRN to specify scratch file disc)
RE,%EDITA
RE,%EDITB
```

```
:RU,LOADR:IH,#ED1K6,,,PE (Uses command file #EDIK6)
```

The system manager should load EDIT shortly after bootup. Doing so prevents EDIT from being loaded in the middle of the RTE system tracks, possibly minimizing the number of contiguous tracks available.

EDIT has five segments, EDIT0 through EDIT4. If EDIT is not loaded as a permanent program, the system manager must also load the RTE utility program T5IDM. T5IDM manages ID segments; refer to the RTE System Manager's Reference Manual if you need to know more about T5IDM.

If you want to load EDIT as a temporary program, you must execute the FMGR command SP for all five segments as well as the main. If T5IDM is not loaded, you must RP all of the EDIT segments before running EDIT.

Under RTE-6/VM, EDIT can be loaded by LINK, which merges all of its segments into one type 6 file. This eliminates the need to load the T5IDM utility or to execute the RP command to restore the ID segments. If EDIT is loaded by LINK, though, it cannot be loaded as a permanent program.

RTE-XL and RTE-A Loading Considerations

Under RTE-XL and RTE-A, all programs are type 6 files and all segments are already merged into the type 6 file. Therefore, there is no need to load T5IDM or execute the RP command to restore the ID segments.

Help File

The file "EDIT." contains all of the text for the EDIT help commands. This file must be accessible to EDIT, or the help command does not work.

On RTE-A, the user can move the file "EDIT." to the global SYSTEM directory under the name EDIT.HLP::SYSTEM. When a help command is executed, EDIT searches the SYSTEM directory for EDIT.HLP. If EDIT does not find it, it searches the FMGR cartridges for the file "EDIT." and uses that file instead.

Work File

EDIT creates a type 1 file called the work file (sometimes called the scratch file) when you run it. If a source file is specified, it is copied into this file. It is the work file, not the source file, that you modify during an EDIT session. The type 1 work file is written to the source file or another file by the EC, ER, WC, or WR commands. The name of the work file depends on the operating system under which you are running EDIT.

Under any operating system, the scratch file cartridge can be specified in the EDIT run string by specifying the -S option. An existing work file can be specified for recover with the -R run string option.

RTE-IVB, RTE-XL

Under RTE-IVB or RTE-XL, the work file namr takes this form:

EDIdx+:0:crn:1:size

where:

EDIdx - The FMGR clone name of the EDIT session. Under RTE-IVB, xx is usually the session LU. If the clone name contains fewer than 5 characters, as in "EDIT", one or more asterisks are added to pad the name. A plus (+) is added as the sixth character of the work file name to identify it as the work file.

Loading EDIT/1000

crn - obtained by EDIT from the entry point \$SCRN, which is initially zero to default to the first cartridge in the cartridge list. To change the default, write a small code module to set \$SCRN and designate a scratch cartridge:

```
ASMB,L
      NAM $SCRN
      ENT $SCRN
$SCRN ASC 1,SC      DEFAULT TO CRN 'SC'
      END
```

This module must be relocated before %EDITA when EDIT is loaded. Neither LU 2 nor 3 (system cartridges) should be designated as the scratch cartridge because EDIT does not have write access to them.

size - usually 100 blocks, depending on the amount of space available on the scratch cartridge. The work file is automatically extended if more room is needed.

Examples:

```
EDI32+:0:SC:1:100
EDIT*+:0:QQ:1:100
```

RTE-6/VM

Under RTE-6/VM, the work file takes one of the following three forms; the first is the CI file system format, the second is the single-CPU FMGR file system format, and the third is the multiple-CPU FMGR file system format:

```
EDIxx+0000000000.EDIT::SCRATCH:1:size
-OR-
EDIxx+:0:crn:1:size
-OR-
EyIxx+:0:crn:1:size
```

where:

EDIxx - same as under RTE-IVB and RTE-XL.

EyIxx - same as EDIxx, except that the y is replaced by the number of the CPU in the multiple-CPU system on which the EDIT session is running.

SCRATCH - the SCRATCH directory, if it exists; otherwise, crn is used.

Loading EDIT/1000

- crn** - If SCRATCH does not exist, EDIT puts the work file on the FMGR scratch cartridge specified in \$SCRN. The default value of \$SCRN is 0, (default to top cartridge in crn list). \$SCRN can be changed by the FMGR VL command (refer to the RTE-6/VM Terminal User's Guide). Do not designate LU 2 or LU 3 to be the scratch cartridge; EDIT does not have write access to them. Unlike RTE-IVB and RTE-XL, you cannot create a module to change \$SCRN; EDIT looks only in the system map.
- size** - usually 512 blocks, depending upon the amount of space available in the SCRATCH directory or the top cartridge. The work file is automatically extended if more room is needed.

RTE-A

Ennnx+0000000000.EDIT::SCRATCH:1:size

-OR-

Ennnx+:0:crn:1:size

where:

Ennnx - file name constructed as follows: The clone name under RTE-A is usually "EDIT". The session ID number replaces characters 2-4, filling from the right: a single-digit ID number replaces only character 4, a two-digit number replaces characters 3 and 4, and a three-digit ID number replaces characters 2-4. If the clone name contains fewer than five characters (as in "EDIT"), the fifth character in Ennnx is replaced with an asterisk.

For example, EDIT in session 32 creates the following work file:

ED32*+0000000000.EDIT::SCRATCH:1:512

EDIT in session 178 creates:

E178*+0000000000.EDIT::SCRATCH:1:512

SCRATCH - the scratch cartridge, if it exists or can be created. If it does not exist and cannot be created, EDIT places the work file on the top FMGR cartridge in the cartridge list.

crn - If EDIT cannot find or create a global directory SCRATCH, it creates the work file on the top FMGR cartridge.

Loading EDIT/1000

size - usually 512 blocks, depending on the amount of space available in the SCRATCH directory or the top FMGR cartridge. The work file is automatically extended if more room is needed.

Appendix B

EDIT/1000 In Multipoint Environment

Introduction

In a multipoint environment, several considerations apply to EDIT operations. A terminal is defined to be in a multipoint environment if its I/O is being processed through driver DVR07. To determine if a terminal is operating under multipoint, observe the transmit break light on the terminal. If it is blinking intermittently, the terminal is probably a multipoint terminal.

When the EDIT is invoked from a multipoint terminal, several actions are performed for the user. The intrinsic tab function of the terminal is enabled (the editor's tab character (cntl I) remains on). The INSERT CHAR, DELETE CHAR, and CLEAR DISPLAY keys on the terminal are enabled for use as editing functions. (Note that the EDIT commands to insert and delete lines should be used, not the INSERT LINE and DELETE LINE keys on the terminal.) Finally, since the CONTROL and ESCAPE keys do not work in a multipoint environment, the Q and O commands rather than the edit commands explained in the preceding sections of this manual should be used to perform character edits.

It should be remembered that in a multipoint environment the ENTER key, and not the carriage return, is the key used to transmit text to the multipoint controller. Furthermore, the characters that the EDIT will process are usually delimited by the left margin on the left and the current cursor position on the right. Paying attention to these observations will help greatly.

In the multipoint environment, screen mode and the command stack features are not available. The slash (/) moves EDIT to the next line. All of the other EDIT commands may be used in a multipoint environment.

Q and O Commands

The Q and O commands are used for character edits in a multipoint environment. Both commands are used to edit the pending line. The only difference between them is that the O command immediately sends a copy of the pending line to the destination work area while the Q command does not. Although only the Q command is discussed throughout the rest of this section, the discussion applies to the O command as well.

When the Q command is entered, the pending line is displayed along with the delimiter (GS) to the left of the line. The delimiter is not part of the text string and must be preserved to assure proper operation. EDIT will position the cursor underneath the first character of the line. You may now edit the line using any of the following procedures.

To retain the pending line as it is, immediately hit the ENTER key. For example:

```
/Q
  ABCDEFGHIJKL-----Cursor displayed under first character in
  -                      line. Press the ENTER key and line is
                        retained as is.
```

```
/P
  ABCDEFGHIJKL-----Line displayed remains the same.
```

```
/
```

To truncate characters from the end of a line, position the cursor immediately after the last character to be retained. Strike the ENTER key to enter all the characters between the left margin and the current cursor position. The intrinsic terminal key CLEAR DISPLAY can also be used to delete characters at the end of a line. After using the CLEAR DISPLAY key, the ENTER key is used to enter the edited line. For example:

/Q
ABCDEF GHIJKL-----Position cursor under I, press ENTER key.

-
ABCDEF GH-----Edited line is displayed.

/Q
ABCDEF GH-----Position cursor under F, press CLEAR
- DISPLAY, then ENTER.

ABCDE-----Edited line is displayed.

/

To add characters in the middle of a line, the INSERT CHAR key may be used. Press the INSERT CHAR key. The red light above the key should come on. Move the cursor to the position where the characters are to be added, and type in the new characters. Finally, position the cursor at the end of the line and hit the ENTER key., The insert light will go off and the edited line will remain as the pending line. For example:

/Q
ABCDEF GHIJKL-----Position cursor underneath F, depress the
- INSERT CHAR key, and type in the new
characters "123". Position cursor at end
of line and press ENTER.

ABCDEF123GHIJKL---Edited line is displayed.

/

To delete one or more characters, position the cursor under each character to be deleted and press the DELETE CHAR key. The character will be deleted from the display and the rest of the line will be shifted left to fill in the gap. After all of the desired deletions have been made, move the cursor to the end of the line and press the ENTER key. Do not delete the delimiter at the beginning of the line. For example:

/Q
ABCDEF GHIJKL-----Position cursor under the G, press the
- DELETE CHAR key three times, move the
cursor to the end of the line and press
ENTER.

ABCDEFJKL-----Edited line is displayed.

/

Tab Control in Multipoint Environment

When the EDIT is invoked in a multipoint environment, the TAB key on the terminal is enabled (the EDIT tab character remains on). The tab stops are initially set to columns 7 and 21. These may be changed using the SET TAB and CLEAR TAB keys on the terminal. The TAB key may be used to position the cursor at any time. It is equivalent to moving the cursor using the terminal keys with arrows on them.

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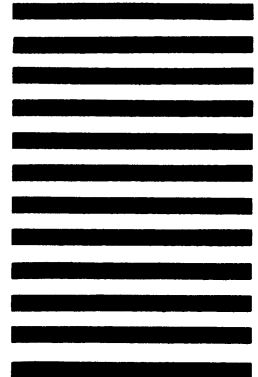
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Tel: 65799
Telex: 0894-259
Cable: BLUESTAR
E

Computer Maintenance Corporation
Ltd.
115, Sarojini Devi Road
SECUNDERABAD 500 003
Tel: 310-184, 345-774
Telex: 031-2960
CH**



SALES & SUPPORT OFFICES

Arranged alphabetically by country

INDONESIA

BERCA Indonesia P.T.
P.O.Box 496/Jkt.
Jl. Abdul Muis 62
JAKARTA
Tel: 21-373009
Telex: 46748 BERSAL IA
Cable: BERSAL JAKARTA
P

BERCA Indonesia P.T.
P.O.Box 2497/Jkt
Antara Bldg., 17th Floor
Jl. Medan Merdeka Selatan 17
JAKARTA-PUSAT
Tel: 21-344-181
Telex: BERSAL IA
A,CS,E,M

BERCA Indonesia P.T.
P.O. Box 174/SBY.
Jl. Kutei No. 11
SURABAYA
Tel: 68172
Telex: 31146 BERSAL SB
Cable: BERSAL-SURABAYA
A*,E,M,P

IRAQ

Hewlett-Packard Trading S.A.
Service Operation
Al Mansoor City 9B/3/7
BAGHDAD
Tel: 551-49-73
Telex: 212-455 HEPAIRAQ IK
CH,CS

IRELAND

Hewlett-Packard Ireland Ltd.
82/83 Lower Leeson Street
DUBLIN 2
Tel: 0001 608800
Telex: 30439
A,CH,CM,CS,E,M,P
Cardiac Services Ltd.
Kilmore Road
Artane
DUBLIN 5
Tel: (01) 351820
Telex: 30439
M

ISRAEL

Eldan Electronic Instrument Ltd.
P.O.Box 1270
JERUSALEM 91000
16, Ohaliav St.
JERUSALEM 94467
Tel: 533 221, 553 242
Telex: 25231 AB/PAKRD IL
A
Electronics Engineering Division
Motorola Israel Ltd.
16 Kremenetski Street
P.O. Box 25016
TEL-AVIV 67899
Tel: 3 88 388
Telex: 33569 Motil IL
Cable: BASTEL Tel-Aviv
CH,CM,CS,E,M,P

ITALY

Hewlett-Packard Italiana S.p.A.
Traversa 99C
Via Giulio Petroni, 19
I-70124 **BARI**
Tel: (080) 41-07-44
M

Hewlett-Packard Italiana S.p.A.
Via Martin Luther King, 38/III
I-40132 **BOLOGNA**
Tel: (051) 402394
Telex: 511630
CH,E,MS
Hewlett-Packard Italiana S.p.A.
Via Principe Nicola 43G/C
I-95126 **CATANIA**
Tel: (095) 37-10-87
Telex: 970291
C,P
Hewlett-Packard Italiana S.p.A.
Via G. Di Vittorio 9
I-20063 **CERNUSCO SUL NAVIGLIO**
(Milano)
Tel: (02) 923691
Telex: 334632
A,CH,CM,CS,E,MP,P
Hewlett-Packard Italiana S.p.A.
Via C. Colombo 49
I-20090 **TREZZANO SUL NAVIGLIO**
(Milano)
Tel: (02) 4459041
Telex: 322116
C,M

Hewlett-Packard Italiana S.p.A.
Via Nuova San Rocco a
Capodimonte, 62/A
I-80131 **NAPOLI**
Tel: (081) 7413544
Telex: 710698
A,CH,E
Hewlett-Packard Italiana S.p.A.
Viale G. Modugno 33
I-16156 **GENOVA PEGLI**
Tel: (010) 68-37-07
Telex: 215238
E,C

Hewlett-Packard Italiana S.p.A.
Via Pelizzo 15
I-35128 **PADOVA**
Tel: (049) 664888
Telex: 430315
A,CH,E,MS
Hewlett-Packard Italiana S.p.A.
Viale C. Pavese 340
I-00144 **ROMA EUR**
Tel: (06) 54831
Telex: 610514
A,CH,CM,CS,E,MS,P*
Hewlett-Packard Italiana S.p.A.
Via di Casellina 57/C
I-50018 **SCANDICCI-FIRENZE**
Tel: (055) 753863
Hewlett-Packard Italiana S.p.A.
Corso Svizzera, 185
I-10144 **TORINO**
Tel: (011) 74 4044
Telex: 221079
CH,E

JAPAN

Yokogawa-Hewlett-Packard Ltd.
152-1, Onna
ATSUGI, Kanagawa, 243
Tel: (0462) 28-0451
CM,C*,E
Yokogawa-Hewlett-Packard Ltd.
Meiji-Seimei Bldg. 6F
3-1 Hon Chiba-Cho
CHIBA, 280
Tel: 472 25 7701
E,CH,CS

Yokogawa-Hewlett-Packard Ltd.
Yasuda-Seimei Hiroshima Bldg.
6-11, Hon-dori, Naka-ku
HIROSHIMA, 730
Tel: 82-241-0611
Yokogawa-Hewlett-Packard Ltd.
Towa Building
2-3, Kaigan-dori, 2 Chome Chuo-ku
KOBE, 650
Tel: (078) 392-4791
C,E

Yokogawa-Hewlett-Packard Ltd.
Kumagaya Asahi 82 Bldg
3-4 Tsukuba
KUMAGAYA, Saitama 360
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CH,CM,E

Yokogawa-Hewlett-Packard Ltd.
Asahi Shinbun Daiichi Seimei Bldg.
4-7, Hanabata-cho
KUMAMOTO, 860
Tel: (0963) 54-7311
CH,E

Yokogawa-Hewlett-Packard Ltd.
Shin-Kyoto Center Bldg.
614, Higashi-Shiokoji-cho
Karasuma-Nishiiru
Shiokoji-dori, Shimogyo-ku
KYOTO, 600
Tel: 075-343-0921
CH,E

Yokogawa-Hewlett-Packard Ltd.
Mito Mitsui Bldg
4-73, Sanno-maru, 1 Chome
MITO, Ibaraki 310
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CH,CM,E

Yokogawa-Hewlett-Packard Ltd.
Sumitomo Seimei 14-9 Bldg.
Meieki-Minami, 2 Chome
Nakamura-ku
NAGOYA, 450
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CH,CM,CS,E,MS

Yokogawa-Hewlett-Packard Ltd.
Chuo Bldg.,
4-20 Nishinakajima, 5 Chome
Yodogawa-ku
OSAKA, 532
Tel: (06) 304-6021
Telex: YHPOSA 523-3624
A,CH,CM,CS,E,MP,P*

Yokogawa-Hewlett-Packard Ltd.
27-15, Yabe, 1 Chome
SAGAMIHARA Kanagawa, 229
Tel: 0427 59-1311
Yokogawa-Hewlett-Packard Ltd.
Daiichi Seimei Bldg.
7-1, Nishi Shinjuku, 2 Chome
Shinjuku-ku, **TOKYO** 160
Tel: 03-348-4611
CH,E

Yokogawa-Hewlett-Packard Ltd.
29-21 Takaido-Higashi, 3 Chome
Suginami-ku **TOKYO** 168
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Telex: 232-2024 YHPTOK
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CH,CS,E

Yokogawa-Hewlett-Packard Ltd.
Yasuda Seimei Nishiguchi Bldg.
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YOKOHAMA 221
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CH,CM,E

JORDAN

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P.O. Box 1387
AMMAN
Tel: 24907, 39907
Telex: 21456 SABCO JO
CH,E,M,P

KENYA

ADCOM Ltd., Inc., Kenya
P.O.Box 30070
NAIROBI
Tel: 331955
Telex: 22639
E,M

KOREA

Samsung Electronics HP Division
12 Fl. Kinam Bldg.
San 75-31, Yeoksam-Dong
Kangnam-Ku
Yeongdong P.O. Box 72
SEOUL
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Telex: K27364 SAMSAN
A,CH,CM,CS,E,M,P

KUWAIT

Al-Khaldiya Trading & Contracting
P.O. Box 830 Safat
KUWAIT
Tel: 42-4910, 41-1726
Telex: 22481 Areeg kt
CH,E,M
Photo & Cine Equipment
P.O. Box 270 Safat
KUWAIT
Tel: 42-2846, 42-3801
Telex: 22247 Matin kt
P

LEBANON

G.M. Dolmadjian
Achrafieh
P.O. Box 165.167
BEIRUT
Tel: 290293
MP**
Computer Information Systems
P.O. Box 11-6274
BEIRUT
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Telex: 22259
C

LUXEMBOURG

Hewlett-Packard Belgium S.A./N.V.
Blvd de la Woluwe, 100
Woluwedal
B-1200 **BRUSSELS**
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Telex: 23-494 paloben bru
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Hewlett-Packard Sales (Malaysia)
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American
Jalan Semantan, Damansara Heights
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Telex: MA31011
A,CH,E,M,P*

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Kuching, SARAWAK
Tel: 36299
Telex: MA 70904 PROMAL
Cable: PROTELENG
A,E,M

MALTA

Philip Toledo Ltd.
Notabile Rd.
MRIHEL
Tel: 447 47, 455 66
Telex: Media MW 649
E,P

MEXICO

Hewlett-Packard Mexicana, S.A.
de C.V.
Av. Periferico Sur No. 6501
Tepepan, Xochimilco
16020 MEXICO D.F.
Tel: 6-76-46-00
Telex: 17-74-507 HEWPAC MEX
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Hewlett-Packard Mexicana, S.A.
de C.V.
Ave. Colonia del Valle 409
Col. del Valle
Municipio de Garza Garcia
MONTERREY, Nuevo Leon
Tel: 78 42 41
Telex: 038 410
CH
ECISA
José Vasconcelos No. 218
Col. Condesa Deleg. Cuauhtémoc
MEXICO D.F. 06140
Tel: 553-1206
Telex: 17-72755 ECE ME
M

MOROCCO

Dolbeau
81 rue Karatchi
CASABLANCA
Tel: 3041-82, 3068-38
Telex: 23051, 22822
E
Gerep
2 rue d'Agadir
Boite Postale 156
CASABLANCA
Tel: 272093, 272095
Telex: 23 739
P

NETHERLANDS

Hewlett-Packard Nederland B.V.
Van Heuven Goedhartlaan 121
NL 1181KK **AMSTELVEEN**
P.O. Box 667
NL 1180 AR **AMSTELVEEN**
Tel: (020) 47-20-21
Telex: 13 216 HEPA NL
A,CH,CM,CS,E,MP,P
Hewlett-Packard Nederland B.V.
Bongerd 2
NL 2906VK **CAPELLE A/D IJSSEL**
P.O. Box 41
NL 2900AA **CAPELLE A/D IJSSEL**
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Telex: 21261 HEPAC NL
A,CH,CS,E

Hewlett-Packard Nederland B.V.
Pastoor Petersstraat 134-136
NL 5612 LV **EINDHOVEN**
P.O. Box 2342
NL 5600 CH **EINDHOVEN**
Tel: (040) 326911
Telex: 51484 hepae nl
A,CH** ,E,M

NEW ZEALAND

Hewlett-Packard (N.Z.) Ltd.
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Cable: HEWPAC Auckland
CH,CM,E,P*

Hewlett-Packard (N.Z.) Ltd.
4-12 Cruickshank Street
Kilbirnie, **WELLINGTON 3**
P.O. Box 9443
Courtenay Place, **WELLINGTON 3**
Tel: 877-199
Cable: HEWPAC Wellington
CH,CM,E,P
Northrop Instruments & Systems Ltd.
369 Khyber Pass Road
P.O. Box 8602
AUCKLAND
Tel: 794-091
Telex: 60605
A,M
Northrop Instruments & Systems Ltd.
110 Mandeville St.
P.O. Box 8388
CHRISTCHURCH
Tel: 486-928
Telex: 4203
A,M

Northrop Instruments & Systems Ltd.
Sturdee House
85-87 Ghuznee Street
P.O. Box 2406
WELLINGTON
Tel: 850-091
Telex: NZ 3380
A,M

NORTHERN IRELAND

See United Kingdom

NORWAY

Hewlett-Packard Norge A/S
Folke Bernadottes vei 50
P.O. Box 3558
N-5033 **FYLLINGSDALEN** (Bergen)
Tel: 0047/5/16 55 40
Telex: 16621 hpnas n
CH,CS,E,MS
Hewlett-Packard Norge A/S
Østerdalen 16-18
P.O. Box 34
N-1345 **ØSTERÅS**
Tel: 0047/2/17 11 80
Telex: 16621 hpnas n
A,CH,CM,CS,E,M,P

OMAN

Khimji Ramdas
P.O. Box 19
MUSCAT
Tel: 722225, 745601
Telex: 3289 BROKER MB MUSCAT
P
Suhail & Saud Bahwan
P.O. Box 169
MUSCAT
Tel: 734 201-3
Telex: 3274 BAHWAN MB

PAKISTAN

Mushko & Company Ltd.
1-B, Street 43
Sector F-8/1
ISLAMABAD
Tel: 51071
Cable: FEMUS Rawalpindi
A,E,M
Mushko & Company Ltd.
Oosman Chambers
Abdullah Haroon Road
KARACHI 0302
Tel: 524131, 524132
Telex: 2894 MUSKO PK
Cable: COOPERATOR Karachi
A,E,M,P*

PANAMA

Electrónico Balboa, S.A.
Calle Samuel Lewis, Ed. Alfa
Apartado 4929
PANAMA 5
Tel: 63-6613, 63-6748
Telex: 3483 ELECTRON PG
A,CM,E,M,P

PERU

Cía Electro Médica S.A.
Los Flamencos 145, San Isidro
Casilla 1030
LIMA 1
Tel: 41-4325, 41-3703
Telex: Pub. Booth 25306
CM,E,M,P

PHILIPPINES

The Online Advanced Systems Corporation
Rico House, Amorsolo Cor. Herrera Street
Legaspi Village, Makati
P.O. Box 1510
Metro MANILA
Tel: 85-35-81, 85-34-91, 85-32-21
Telex: 3274 ONLINE
A,CH,CS,E,M
Electronic Specialists and Proponents Inc.
690-B Epifanio de los Santos Avenue
Cubao, **QUEZON CITY**
P.O. Box 2649 Manila
Tel: 98-96-81, 98-96-82, 98-96-83
Telex: 40018, 42000 ITT GLOBE
MACKAY BOOTH
P

PORTUGAL

Mundinter
Intercambio Mundial de Comércio
S.A.R.L.
P.O. Box 2761
Av. Antonio Augusto de Aguiar 138
P-LISBON
Tel: (19) 53-21-31, 53-21-37
Telex: 16691 munter p
M
Soquimica
Av. da Liberdade, 220-2
1298 **LISBOA** Codex
Tel: 56 21 81/2/3
Telex: 13316 SABASA
P
Telectra-Empresa Técnica de Equipamentos Eléctricos S.A.R.L.
Rua Rodrigo da Fonseca 103
P.O. Box 2531
P-LISBON 1
Tel: (19) 68-60-72
Telex: 12598
CH,CS,E,P

PUERTO RICO

Hewlett-Packard Puerto Rico
Ave. Muñoz Rivera #101
Esq. Calle Ochoa
HATO REY, Puerto Rico 00918
Tel: (809) 754-7800
Hewlett-Packard Puerto Rico
Calle 272 Edificio 203
Urb. Country Club
RIO PIEDRAS, Puerto Rico
P.O. Box 4407
CAROLINA, Puerto Rico 00628
Tel: (809) 762-7255
A,CH,CS

QATAR

Compuetearbia
P.O. Box 2750
DOHA
Tel: 883555
Telex: 4806 CHPARB
P
Eastern Technical Services
P.O. Box 4747
DOHA
Tel: 329 993
Telex: 4156 EASTEC DH
Nasser Trading & Contracting
P.O. Box 1563
DOHA
Tel: 22170, 23539
Telex: 4439 NASSER DH
M

SAUDI ARABIA

Modern Electronic Establishment Hewlett-Packard Division
P.O. Box 22015
Thuobah
AL-KHOBAR
Tel: 895-1760, 895-1764
Telex: 671 106 HPMEEK SJ
Cable: ELECTA AL-KHOBAR
CH,CS,E,M
Modern Electronic Establishment Hewlett-Packard Division
P.O. Box 1228
Redec Plaza, 6th Floor
JEDDAH
Tel: 644 38 48
Telex: 4027 12 FARNAS SJ
Cable: ELECTA JEDDAH
CH,CS,E,M
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RIYADH
Tel: 491-97 15, 491-63 87
Telex: 202049 MEERYD SJ
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Abdul Ghani El Ajou
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RIYADH
Tel: 40 41 717
Telex: 200 932 EL AJOU
P

SCOTLAND

See United Kingdom

SINGAPORE

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Telex: HPSGSO RS 34209
Cable: HEWPAC, Singapore
A,CH,CS,E,MS,P



SALES & SUPPORT OFFICES

Arranged alphabetically by country

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Dynamar International Ltd.
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Kolam Ayer Industrial Estate
SINGAPORE 1334
Tel: 747-6188
Telex: RS 26283
CM

SOUTH AFRICA

Hewlett-Packard So Africa (Pty.) Ltd.

Hewlett-Packard Española S.A.
Calle Ramon Gordillo, 1 (Entlo.3)
E-VALENCIA 10
Tel: 361-1354
CH,P

SWEDEN

Hewlett-Packard Sverige AB
Sunnanvagen 14K
S-22226 LUND
Tel: (046) 12 60 70

Middle East Electronics
P.O.Box 2308
Abu Rummaneh
DAMASCUS
Tel: 33 4 5 92
Telex: 411 304
M

TAIWAN

Hewlett-Packard Far East Ltd.
Kaohsiung Office

E.M.A.
Medina Eldem Sokak No.41/6
Yüksel Caddesi
ANKARA
Tel: 175 622
Telex: 42 591
M

UNITED ARAB EMIRATES

Emilac Ltd.
P.O. Box 2711

P.O. Box 120
Howard Place **CAPE PROVINCE 7450**
Pine Park Center, Forest Drive,
Pinelands
CAPE PROVINCE 7405
Tel: 53-7954
Telex: 57-20006
A,CH,CM,E,MS,P
Hewlett-Packard So Africa (Pty.) Ltd.
P.O. Box 37099
92 Overport Drive
DURBAN 4067
Tel: 28-4178, 28-4179, 28-4110
Telex: 6-22954
CH,CM
Hewlett-Packard So Africa (Pty.) Ltd.
6 Linton Arcade
511 Cape Road
Linton Grange
PORT ELIZABETH 6000
Tel: 041-302148
CH

Hewlett-Packard So Africa (Pty.) Ltd.
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Glenstantia 0010 **TRANSVAAL**
1st Floor East
Constantia Park Ridge Shopping
Centre
Constantia Park
PRETORIA
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Telex: 32163
CH,E

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Telex: 4-20877
Cable: HEWPACK Johannesburg
A,CH,CM,CS,E,MS,P

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E-BARCELONA 29
Tel: 322.24.51, 321.73.54
Telex: 52603 hpbce
A,CH,CS,E,MS,P
Hewlett-Packard Española S.A.
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Edificio Albia II
E-BILBAO 1
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A,CH,E,MS

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CH
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Tel: (040) 70270
Telex: (854) 17886 (via Spånga
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Hewlett-Packard Sverige AB
Västra Vintergatan 9
S-70344 ÖREBRO
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CH

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S-42132 VÄSTRA-FRÖLUNDA
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A
Hewlett-Packard (Schweiz) AG
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Case Postale 365
CH-1217 MEYRIN 2
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Telex: 27333 HPAG CH
CH,CM,CS
Hewlett-Packard (Schweiz) AG
Allmend 2
CH-8967 WIDEN
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Telex: 53933 hpag ch
Cable: HPAG CH
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SYRIA

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CH,CS,E
Hewlett-Packard Far East Ltd.
Taiwan Branch
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TAIPEI
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Telex: 24439 HEWPACK
Cable: HEWPACK Taipei
A,CH,CM,CS,E,M,P
Ing Lih Trading Co.
3rd Floor, 7 Jen-Ai Road, Sec. 2
TAIPEI 100
Tel: (02) 3948191
Cable: INGLIH TAIPEI
A

THAILAND

Unimesa
30 Patpong Ave., Suriwong
BANGKOK 5
Tel: 235-5727
Telex: 84439 Simonco TH
Cable: UNIMESA Bangkok
A,CH,CS,E,M
Bangkok Business Equipment Ltd.
5/5-6 Dejo Road
BANGKOK
Tel: 234-8670, 234-8671
Telex: 87669-BEQUIPT TH
Cable: BUSIQUIPT Bangkok
P

TRINIDAD & TOBAGO

Caribbean Telecoms Ltd.
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PORT-OF-SPAIN
Tel: 62-44213, 62-44214
Telex: 235,272 HUGCO WG
CM,E,M,P

TUNISIA

Tunisie Electronique
31 Avenue de la Liberte
TUNIS
Tel: 280-144
E,P
Corema
1 ter. Av. de Carthage
TUNIS
Tel: 253-821

ABU DHABI
Tel: 82 04 19-20
Cable: EMITAC ABUDHABI
Emilac Ltd.
P.O. Box 1641
SHARJAH
Tel: 591 181
Telex: 68136 Emilac Sh
CH,CS,E,M,P

UNITED KINGDOM

GREAT BRITAIN
Hewlett-Packard Ltd.
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E,CH,CS,P

Hewlett-Packard Ltd.
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CH,CS,E,P

Hewlett-Packard Ltd.
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Bridewell Place
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CH,CS

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CH,CS,P

SALES & SUPPORT OFFICES

Arranged alphabetically by country



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